HSBC Holdings plc
Annual Report and Accounts 2022

HSBC | Opening up a world of opportunity

Opening up a world of opportunity

Our ambition is to be the preferred international financial partner for our clients.

Our purpose, ambition and values reflect our strategy and support our focus on execution.

Read more on our values and strategy on pages 4 and 11.

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Our approach to ESG reporting
We embed our ESG reporting and Task Force on Climate-related Financial Disclosures ('TCFD') within our *Annual Report and Accounts*. Our TCFD disclosures are highlighted with the following symbol: TCFD

This *Strategic Report* was approved by the Board on 21 February 2023.

Mark E Tucker
Group Chairman

A reminder
The currency we report in is US dollars.

Adjusted measures
We supplement our IFRSs figures with non-IFRSs measures used by management internally that constitute alternative performance measures under European Securities and Markets Authority guidance and non-GAAP financial measures defined in and presented in accordance with US Securities and Exchange Commission rules and regulations. These measures are highlighted with the following symbol:

Further explanation may be found on page 29.

None of the websites referred to in this *Annual Report and Accounts 2022* for the year ended 31 December 2022 (including where a link is provided), and none of the information contained on such websites, are incorporated by reference in this report.

Cover image: Opening up a world of opportunity
Our cover features Stitt, one of HSBC's two bronze lions. Touching the lion's paw was said to bring good luck, and that tradition continues today. The lions, Stephen and Stitt, designed by British sculptor Henry Poole, were commissioned to celebrate the opening of the newly-rebuilt HSBC building on the Bund in Shanghai in 1923. Stephen and Stitt represent the strength and endurance that is part of our heritage. Loyal and proud, they stand guard outside our offices in Hong Kong, London and Shanghai, and symbolise good fortune and stability.

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Performance in 2022

HSBC is one of the world's leading international banks.

We have a clear strategy to deliver revenue and profit growth, enhance customer service and improve returns to shareholders.

Delivery against our financial targets

In assessing the Group's financial performance, we use a range of financial measures that focus on the delivery of sustainable returns for our shareholders and maintaining our financial strength.

- For our financial targets, we define medium term as three to four years and long term as five to six years, commencing 1 January 2020.
- Further explanation of performance against Group financial targets can be found on page 26.

Return on average tangible equity

9.9%

Target: ≥12% from 2023 onwards.
(2021: 8.3%)

Adjusted operating expenses

$30.5bn

Target: 2022 adjusted operating expenses broadly stable compared with 2021.
(2021: $30.1bn)

Gross risk-weighted asset reduction

$128bn

Since the start of the programme.
Target: >$110bn by the end of 2022.

Common equity tier 1 capital ratio

14.2%

Target: >14%, managing in the range of 14% to 14.5% in the medium term; and manage the range down further long term.
(2021: 15.8%)

Dividend per share

$0.32

2022 payout ratio: 44%
Updated target: dividend payout ratio of 50% for 2023 and 2024, excluding material significant items.
Previous target: sustainable cash dividends with a payout ratio of 40% to 55% from 2022 onwards.

Strategic performance indicators

Our strategy supports our ambition of being the preferred international financial partner for our clients.

We are committed to building a business for the long term, developing relationships that last.

- Read more on our strategic progress on page 11.
- Read more on how we set and define our environmental, social and governance metrics on page 16.
- Read more on our financed emissions scope, methodology and terminology on page 50, and our definition of sustainable finance and investment on page 57.

Capital allocation to Asia

47%

Tangible equity as a percentage of the Group's (excluding associates, holding companies, and consolidation adjustments).
(2021: 42%)

Net new invested assets

$80bn

Generated in 2022, of which $59bn were in Asia.

Gross cost saves

$5.6bn

Delivered from our cost-reduction programme, with an expected additional $1bn in 2023, and a total programme cost of $6.5bn.

Gender diversity

33.3%

Women in senior leadership roles.
(2021: 31.7%)

Sustainable finance and investment

$210.7bn

Cumulative total provided and facilitated since January 2020.
(2021: $126.7bn)

Net zero in our own operations

58.5%

Cumulative reduction in absolute greenhouse gas emissions from 2019 baseline.
(2021: 50.3%)

Financed emissions targets

8 sectors

Number of sectors where we have set on-balance sheet financed emissions targets.

Highlights

Financial performance reflected net interest income growth and cost discipline, and we continued to make progress against our four strategic pillars.

Financial performance (vs 2021)

- **Reported profit before tax fell by $1.4bn to $17.5bn,** including an impairment on the planned sale of our retail banking operations in France of $2.4bn. **Adjusted profit before tax increased by $3.4bn to $24.0bn. Reported profit after tax increased by $2.0bn to $16.7bn,** including a $2.2bn credit arising from the recognition of a deferred tax asset.
- **Reported revenue increased by 4% to $51.7bn,** driven by strong growth in net interest income, with increases in all of our global businesses, and higher revenue from Global Foreign Exchange in Global Banking and Markets ('GBM'). This was in part offset by a $3.1bn adverse impact of foreign currency translation differences, the impairment on the planned sale of our retail banking operations in France and adverse movements in market impacts in insurance manufacturing in Wealth and Personal Banking ('WPB'). In addition, fee income fell in both WPB and GBM. **Adjusted revenue increased by 18% to $55.3bn.**
- **Net interest margin ('NIM') of 1.48% increased by 28 basis points ('bps'),** reflecting interest rate rises.
- **Reported expected credit losses and other credit impairment charges ('ECL') were $3.6bn,** including allowances to reflect increased economic uncertainty, inflation, rising interest rates and supply chain risks, as well as the ongoing developments in mainland China's commercial real estate sector. These factors were in part offset by the release of most of our remaining Covid-19-related reserves. This compared with releases of $0.9bn in 2021. ECL charges were 36bps of average gross loans and advances to customers.
- **Reported operating expenses decreased by $1.3bn or 4% to $33.3bn,** reflecting the favourable impact of foreign currency translation differences of $2.2bn and ongoing cost discipline, which were in part offset by higher restructuring and other related costs, increased investment in technology and inflation. **Adjusted operating expenses increased by $0.4bn or 1.2% to $30.5bn,** including a $0.2bn adverse impact from retranslating the 2022 results of hyperinflationary economies at constant currency.
- **Customer lending balances fell by $121bn on a reported basis. On an adjusted basis, lending balances fell by $66bn,** reflecting an $81bn reclassification of loans, primarily relating to the planned sale of our retail banking operations in France and the planned sale of our banking business in Canada, to assets held for sale. Growth in mortgage balances in the UK and Hong Kong mitigated a reduction in term lending in Commercial Banking ('CMB') in Hong Kong.
- **Common equity tier 1 ('CET1') capital ratio of 14.2% reduced by 1.6 percentage points,** primarily driven by a decrease of a 0.8 percentage point from new regulatory requirements, a reduction of a 0.7 percentage point from the fall in the fair value through other comprehensive income ('FVOCI') and a 0.3 percentage point fall from the impairment following the reclassification of our retail banking operations in France to held for sale. Capital generation was mostly offset by an increase in risk-weighted assets ('RWAs') net of foreign exchange translation movements.
- **The Board has approved a second interim dividend of $0.23 per share, making a total for 2022 of $0.32 per share.**

Outlook

- The impact of our growth and transformation programmes, as well as higher global interest rates, give us **confidence in achieving our return on average tangible equity ('RoTE') target of at least 12% for 2023 onwards.**
- Our revenue outlook remains positive. Based on the current market consensus for global central bank rates, **we expect net interest income of at least $36bn in 2023** (on an IFRS 4 basis and retranslated for foreign exchange movements). We intend to update our net interest income guidance at or before our first quarter results to incorporate the expected impact of IFRS 17 'Insurance Contracts'.
- While we continue to use a range of 30bps to 40bps of average loans for planning our ECL charge over the medium to long term, given current macroeconomic headwinds, **we expect ECL charges to be around 40bps in 2023** (including lending balances transferred to held for sale). We note recent favourable policy developments in mainland China's commercial real estate sector and continue to monitor events closely.
- We retain our focus on cost discipline and **will target 2023 adjusted cost growth of approximately 3%** on an IFRS 4 basis. This includes up to $300m of severance costs in 2023, which we expect to generate further efficiencies into 2024. There may also be an incremental adverse impact from retranslating the 2022 results of hyperinflationary economies at constant currency.
- **We expect to manage the CET1 ratio within our medium-term target range of 14% to 14.5%.** We intend to continue to manage capital efficiently, returning excess capital to shareholders where appropriate.
- Given our current returns trajectory, **we are establishing a dividend payout ratio of 50% for 2023 and 2024,** excluding material significant items, with consideration of buy-backs brought forward to our first quarter results in May 2023, subject to appropriate capital levels. We also intend to revert to paying quarterly dividends from the first quarter of 2023.
- Subject to the completion of the sale of our banking business in Canada, **the Board's intention is to consider the payment of a special dividend of $0.21 per share as a priority use of the proceeds generated by completion of the transaction.** A decision in relation to any potential dividend would be made following the completion of the transaction, currently expected in late 2023, with payment following in early 2024. Further details in relation to record date and other relevant information will be published at that time. Any remaining additional surplus capital is expected to be allocated towards opportunities for organic growth and investment alongside potential share buy-backs, which would be in addition to any existing share buy-back programme.

Strategic progress

- We have made progress in implementing our transformation programme, **establishing a platform for future growth.**
- During 2022, we took further actions to reshape the Group. **In November 2022, we announced the planned sale of our banking business in Canada, which is expected to be completed in late 2023, subject to regulatory and governmental approvals.** In addition, we are in the process of disposing of our retail banking operations in France, as well as exiting our businesses in Greece and Russia, subject to regulatory and governmental approvals.
- As part of our efforts to improve the returns profile of the Group, **we surpassed our gross RWA reduction target, generating cumulative gross RWA reductions of $128bn since the start of the programme in 2020.**
- Our cost-reduction programme continued to make progress, with a further $2.3bn of gross cost savings recognised in 2022. **Since the start of the programme in 2020, we have realised gross savings of $5.6bn, with cost to achieve spend of $6.5bn.** While our three-year cost to achieve programme has now concluded, the Group-wide focus on cost discipline remains resolute.
- We have continued to invest and grow in the areas in which we are strongest. **In our Wealth business in Asia, we attracted net new invested assets of $59bn in 2022.**

ESG highlights

Transition to net zero

- We have **set interim 2030 targets for on-balance sheet financed emissions for eight sectors.** These include six sectors for which we have reported 2019 and 2020 emissions: oil and gas; power and utilities; cement; iron, steel and aluminium; aviation; and automotive. We have also set targets for thermal coal power and thermal coal mining. We recognise that methodologies and data for measuring emissions will continue to evolve.
- We published an updated energy policy, which is an important mechanism to help **phase down the financed emissions of our energy portfolio in line with a 1.5°C pathway.** We also updated our thermal coal phase-out policy with new targets to **reduce absolute on-balance sheet financed emissions from thermal coal mining and coal-fired power,** and extended the policy to exclude finance for the specific purposes of new metallurgical coal mines.
- Since 2020, we have **provided and facilitated $210.7bn of sustainable finance and investment, an increase of $84.2bn in the past year.**
- Within our own operations, **we have made a 58.5% cumulative reduction in our absolute greenhouse gas emissions from a 2019 baseline.** We also published supply chain emissions as part of our scope 3 disclosures for the first time.

Build inclusion and resilience

- Having surpassed our 2020 target to reach 30% women in senior leadership roles, **we have made progress towards our goal to achieve 35% by 2025, with 33.3% achieved in 2022.** We continue to make progress towards the target we set in 2020 to at least double the number of Black senior leaders within five years.
- **We have stepped up efforts to support customers in the face of inflation and the rising cost of living,** particularly in the UK. We have focused on early intervention, using data analysis to identify potentially impacted customers in our WPB and CMB businesses, signpost to relevant resources, and provide tailored support.
- We are working to make the banking experience more accessible in both physical and digital spaces. We are committed to ensuring that our **digital channels are usable by everyone, regardless of ability.** The introduction of features such as safe spaces, quiet hours and talking ATMs are helping to make our physical spaces more accessible as well.

Act responsibly

- We conducted a review of our **salient human rights issues,** including stakeholder consultation with non-governmental organisations ('NGOs') and potentially affected groups.
- We aim to be a top-three bank for customer satisfaction. While our net promoter scores have improved in many of our key markets, we have more work to do to improve our position relative to peers, as some have improved their performance more quickly.
- We have launched a **sustainable procurement mandatory procedure** for our employees and a **new supplier code of conduct** to help ensure our sustainability objectives are embedded in the way we operate and do business with suppliers.

Who we are

HSBC is one of the largest banking and financial services organisations in the world. We aim to create long-term value for our shareholders and capture opportunity.

Our values

Our values help define who we are as an organisation, and are key to our long-term success.

We value difference
Seeking out different perspectives

We succeed together
Collaborating across boundaries

We take responsibility
Holding ourselves accountable and taking the long view

We get it done
Moving at pace and making things happen

Our strategy

Our strategy supports our ambition of being the preferred international financial partner for our clients, centred around four key areas.

Focus on our strengths
In each of our global businesses, we continue to focus on areas where we are strongest and have opportunities to grow.

Digitise at scale
We continue to invest in our technology and operational capabilities to drive operating productivity across businesses and geographies and to offer better client experience.

Energise for growth
We are building a dynamic and inclusive culture, and empowering our people by helping them develop future skills.

Transition to net zero
We are helping the transition to a net zero economy by transforming ourselves, and supporting our customers to make their own transitions.

For further details on our strategy, see pages 11 to 13.

Our global reach

Our global businesses serve around 39 million customers worldwide through a network that covers 62 countries and territories.

Our customers range from individual savers and investors to some of the world's biggest companies, governments and international organisations. We aim to connect them to opportunities and help them to achieve their ambitions.

Assets of
$3.0tn

Approximately
39m
Customers bank with us[1]

Operations in
62
Countries and territories

We employ approximately
219,000
Full-time equivalent staff

For further details of our customers and approach to geographical information, see page 108.

1 Our customer numbers exclude those acquired through our purchase of L&T Investment Management.

Our global businesses

We serve our customers through three global businesses.

On pages 31 to 37 we provide an overview of our performance in 2022 for each of our global businesses, as well as our Corporate Centre.

In each of our global businesses, we focus on delivering growth in areas where we have distinctive capabilities and have significant opportunities.

Each of the chief executive officers of our global businesses reports to our Group Chief Executive, who in turn reports to the Board of HSBC Holdings plc.

Wealth and Personal Banking ('WPB')
We help millions of our customers look after their day-to-day finances and manage, protect and grow their wealth.

For further details, see page 31.

Commercial Banking ('CMB')
Our global reach and expertise help domestic and international businesses around the world unlock their potential.

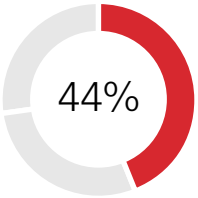
For further details, see page 33.

Global Banking and Markets ('GBM')
We provide a comprehensive range of financial services and products to corporates, governments and institutions.

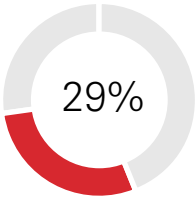
For further details, see page 35.

Adjusted revenue by global business[1]

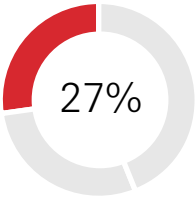
Wealth and Personal Banking



Commercial Banking



Global Banking and Markets



1 Calculation is based on adjusted revenue of our global businesses excluding Corporate Centre, which is also excluded from the total adjusted revenue number. Corporate Centre had negative adjusted revenue of $596m in 2022.

Our stakeholders

Building strong relationships with our stakeholders helps enable us to deliver our strategy in line with our long-term values, and operate the business in a sustainable way.

Our stakeholders are the people who work for us, bank with us, own us, regulate us, and live in the societies we serve and the planet we all inhabit. These human connections are complex and overlap.

Many of our employees are customers and shareholders, while our business customers are often suppliers. We aim to serve, creating value for our customers and shareholders.

Our size and global reach mean our actions can have a significant impact. We are committed to doing business responsibly, and thinking for the long term. This is key to delivering our strategy.

For further details of how we are engaging with our stakeholders, see page 15.
Our section 172 statement, detailing our Directors' responsibility to stakeholders, can be found on page 20.

Group Chairman's statement

Mark E Tucker
Group Chairman

The global economy remains volatile, but our strategy is delivering improved returns for shareholders and HSBC is well placed to compete as the economy recovers.

At the start of 2022, the ongoing impact of Covid-19 was the most dominant factor within the external environment. While further outbreaks in Hong Kong and mainland China significantly impacted economic growth, the Russia-Ukraine war and rising inflation and interest rates had an even greater impact on the global economy in 2022. They are also likely to continue to have a greater economic impact than the pandemic in 2023, as we are already seeing with a cost of living crisis affecting many of our customers and colleagues.

Strong financial performance and higher capital distributions

We supported our customers through the challenges that they faced at the same time as executing our strategic plan. The first phase of our transformation is now complete. The work that we have done has enabled us to emerge from the pandemic a stronger bank, better aligned to the international needs of our customers.

The reshaping of our portfolio continued with the announcement of the planned sale of our banking business in Canada. We continued to develop our Wealth capabilities, especially in Asia, and this strategy gained traction in 2022. Our increased investment in technology has improved the customer experience and made our processes more efficient. Meanwhile, we continued to support our clients to transition to net zero, and also took further important steps towards our ambition of aligning our financed emissions to net zero by 2050. Given the urgency of today's global energy crisis, it is now even more important that we continue to actively engage our clients on how they intend to prepare their businesses for a low-carbon future.

In 2022, reported profit before tax was $17.5bn, a decrease of $1.4bn compared with 2021 due to the $2.4bn impairment on the planned sale of our French retail banking operations. Adjusted profit before tax was $24.0bn, an increase of $3.4bn on last year. All of our businesses grew profits in 2022, and we maintained our strong capital, funding and liquidity positions.

As we signalled at our interim results, we are committed to ensuring our shareholders share the benefits of our improved performance. The Board approved a second interim dividend for 2022 of $0.23 per share, bringing the full year dividend for 2022 to $0.32 per share. We are establishing a dividend payout ratio of 50% of reported earnings per share for 2023 and 2024, excluding material significant items, and we aim to restore the dividend to pre-Covid-19 levels as soon as possible. We also intend to return to paying quarterly dividends from the start of 2023.

Subject to completion of the planned sale of our banking business in Canada, the Board's intention is to consider the payment of a special dividend of $0.21 per share as a priority use of the proceeds generated. A decision in relation to any potential dividend would be made following the completion of the transaction, currently expected in late 2023, with payment following in early 2024. Any remaining additional surplus capital is expected to be allocated towards opportunities for organic growth and investment alongside share buy-backs, which would be in addition to any existing share buy-back programme.

Board operations

In 2022, the Board met in person in London, Hong Kong, New York and Riyadh – on each occasion also undertaking a wide range of engagements with clients, colleagues, government officials and regulators. The importance of engaging with our teams was also underlined by the appointment of José (Pepe) Meade as Board member with specific responsibility for employee liaison. At the same time as holding some in-person meetings, the continued use of virtual meetings enabled us to retain the benefits of greater efficiency and reduced costs.

At the 2022 Annual General Meeting, Irene Lee and Pauline van der Meer Mohr stepped down from the Board. I am enormously grateful to them for their important and valuable contributions to the Board, the committees and the subsidiary entities on which they have served. Irene remains an independent non-executive Director of The Hongkong and Shanghai Banking Corporation Limited and independent non-executive chair of Hang Seng Bank Limited. Geraldine Buckingham joined the Board as an independent non-executive Director on 1 May.

Following Ewen Stevenson's departure, Georges Elhedery became Group Chief Financial Officer and joined the Board on 1 January 2023. On behalf of the Board, I would like to again thank Ewen for all that he has done for the bank. His leadership, financial expertise and operational rigour have been invaluable to HSBC, and he leaves with our very best wishes.

"Given the urgency of today's global energy crisis, it is now even more important that we continue to actively engage our clients on how they intend to prepare their businesses for a low-carbon future."

We also recently announced some changes to the Board. Kalpana Morparia will join the Board as an independent non-executive Director on 1 March. Jack Tai will retire from the Board at the conclusion of the 2023 AGM, and will be succeeded as Chair of the Group Risk Committee by Jamie Forese. Jack has made a significant and important contribution during his time on the Board, particularly in the strengthening of risk and conduct governance and oversight through a period of major change. We wish him very well in his future endeavours.

Noel and I were delighted to meet face-to-face with our loyal Hong Kong shareholders at our Informal Shareholders Meeting in August. We have always greatly valued their feedback and engagement, and this meeting was as well attended as ever. We were pleased to discuss how our business has performed, our continued support of Hong Kong, and our commitment to growing shareholder value. We look forward to continuing these discussions in person in 2023.

Our strategy is working

There were reports over the course of last year about ideas for alternative structures for HSBC. The Board has been fully engaged in examining these alternatives in depth, with the benefit of independent third-party financial and legal advice. It has been, and remains, our judgement that alternative structural options would not deliver increased value for shareholders. Rather, they would have a material negative impact on value.

For 157 years, we have followed trade and investment flows to support our customers as they fulfil their financial ambitions. We have used our experience, expertise and relationships to help our customers to navigate the world.

Today, we remain steadfastly focused on our core purpose of 'opening up a world of opportunity'. Our model is particularly relevant to individuals and companies of all sizes whose financial ambitions span multiple countries and regions. Very few, if any, other banks can rival our ability to connect capital, ideas and people through a global network that facilitates the international access and collaboration required to succeed in today's world.

Our performance in 2022 demonstrates that our current strategy is working and improving returns. We are also confident that it will deliver good returns for our shareholders over the coming years. The Board and management team are fully focused on delivering it.

An uneven macroeconomic outlook

We will need to maintain this focus against an uneven macroeconomic outlook. The pandemic, high inflation and interest rates, and the Russia-Ukraine war all have implications for the global economy, including volatility in markets, supply chain disruption, pressure on small and medium-sized business and squeezes on the cost of living. Different economies also now face different challenges and have different opportunities in 2023.

China's reopening and package of measures to stabilise the property market should provide a significant boost for its economy and the global economy, albeit with some near-term volatility. Our economists forecast China's GDP will grow 5% in 2023. The reopening of the border means that Hong Kong, and the entire Greater Bay Area, are likely to be major beneficiaries, and I expect to see a strong recovery.

More broadly, Asia as a whole has proven resilient and there is the prospect of a strong rebound later in the year. Virtually all economies in the region have now recovered the output losses incurred during the pandemic and are above 2019 levels.

The Middle East economies enjoyed a strong 2022, and we expect this momentum to continue in 2023 on the back of the important reforms underway to transform, diversify and grow the region's economies. We see strong and growing demand to connect clients in the Middle East with Asia's economies, and vice versa.

In contrast, Europe, including the UK, face challenges from higher energy prices fuelling inflation and necessitating higher interest rates, driven in part by the Russia-Ukraine war. All of these factors are contributing to a cost of living crisis and more economic uncertainty. We expect that any recession, if there is one at all, will be relatively shallow.

The US economy is proving resilient and a hard landing appears unlikely. Some economists believe that inflation may now have peaked in the US, and there is consensus that the US will avoid recession. I expect the US to make an important contribution to global GDP growth in 2023.

Overall, I am optimistic about the global economy in the second half of 2023, but there is still a high level of uncertainty due to the Russia-Ukraine war and recessionary fears may yet dominate much of the year ahead.

Navigating geopolitics remains challenging

The geopolitical environment remains challenging for our clients to navigate. There is sadly no end in sight to the Russia-Ukraine war. However, the West's relationship with China appears to be relatively stable. The renewed, constructive dialogue between President Xi and President Biden at the G20 in November was clearly important. While further US sanctions are expected this year, capital flows between China and the West increased during the pandemic, even with reciprocal tariffs in place. China is also taking an active approach to diplomatic engagement with European nations, including the UK. China's reopening will also allow for the resumption of face-to-face visits, which will support greater dialogue between China and important partners such as Germany, France and the UK. We also naturally continue to engage with governments around the world.

One of the key trends of the past three years has been supply chain disruption, due largely to a combination of geopolitics, pandemic and war-related factors. Businesses are seeking to build greater resilience into their supply chains, reduce their dependence on sole suppliers or regions, and take the opportunity to digitise. I expect these trends all to continue throughout 2023. HSBC's global network means we are well placed to adapt to regional diversification that takes place within supply chains.

Thank you to my colleagues

Finally, my colleagues have once again shown great dedication, energy and care in serving our customers and working together over the past year. They have exemplified our purpose of 'opening up a world of opportunity' and our core values. While we want to achieve even more in 2023 and beyond, I am very proud of what they achieved in 2022 – and I am extremely grateful to each of them.

Mark E Tucker
Group Chairman

21 February 2023

Group Chief Executive's review

Noel Quinn
Group Chief Executive

The progress that we have made over the past three years means that HSBC is well positioned to deliver higher returns and has a good platform for future growth.

Return on average tangible equity
9.9%
(2021: 8.3%)

Adjusted revenue
$55.3bn
(2021: $47.0bn)

We have completed the first phase of our transformation. Our international connectivity is now underpinned by good, broad-based profit generation around the world. Our focus is now on continuing to grow our core business, while also capitalising on the new sources of value creation that we have built.

When we embarked on our transformation programme in February 2020, our aim was to address the fundamental issues that had contributed to a decade of low returns. It was clear to me that too much of our capital was being used inefficiently, too many of our businesses were loss-making and sub-scale, and too many of our clients were low returning and purely domestic in nature. Over the last three years, while responding to the challenges of the pandemic, we have structurally repositioned our businesses and operating model to achieve higher returns.

The most significant changes to our portfolio have been the exit and wind-down of non-strategic assets and clients in the Americas and Europe, and the investment in technology and in organic and inorganic growth in Asia, especially in Wealth and Personal Banking. We have completed the sale of our US mass market retail business, and announced the planned exit of our French retail banking operations and the planned sale of our banking business in Canada. We have also announced exits in other smaller businesses, including Greece and Russia. A key factor in assessing the strategic value of our businesses has been whether they capitalise on the distinct advantages that we have, especially those derived from our global network.

Our work to increase capital efficiency resulted in cumulative risk-weighted asset savings of $128bn by the end of 2022, in excess of our original target as we accelerated restructuring in the US and Europe. This enabled us to reallocate capital towards Asia and the Middle East.

Finally, we have transformed our cost base and restored tight cost discipline across the organisation. Our cost to achieve programme concluded at the end of 2022, but it enabled us to take multiple layers of inefficiency out of the business and embed changes that we expect to provide flow-through benefits for years to come.

Building a good platform for future growth

At the same time, we have invested in new sources of value creation that provide a good platform for future growth. Developing our capabilities in Wealth, particularly in Asia, has been a strategic priority as we have sought to diversify our revenues. We have done this organically through the build-out of our Pinnacle business in mainland China, and inorganically through the purchases of AXA Singapore and L&T Investment Management in India, by increasing our stake to 90% in HSBC Qianhai Securities, and by taking full ownership of our HSBC Life China insurance business. The traction that we are gaining in Wealth is reflected by the $80bn of net new invested assets that we attracted in 2022, $59bn of which were in Asia.

"The difference compared with three years ago is that our international connectivity is now underpinned by good broad-based profit generation around the world."

Our core purpose is 'opening up a world of opportunity' and that, in essence, is what we do by helping our personal and corporate customers to move money between countries and do business across borders. This is still the best way for us to create value, and what makes us a world leading bank for international and mid-market customers. We are the number one trade finance bank, and trade revenue was up 13% in 2022, surpassing the good level of growth in the previous year. Trade also increased in all regions.

We are also one of the leading global foreign exchange houses and a leading payments company globally, with over $600tn of payments processed in 2022. Our global connectivity has made international our fastest-growing revenue segment in Wealth and Personal Banking. Products like Global Money and our Wealth platforms are specifically designed to meet the international needs of our retail and wealth customers. These customers also provide around double the average revenue of domestic-only customers.

The difference compared with three years ago is that our international connectivity is now underpinned by good broad-based profit generation around the world. Already the leading bank in Hong Kong, we gained market share last year in key products including customer deposits, insurance and trade finance. We are also the leading foreign bank in mainland China by revenue and are pleased to have received seven main licence approvals since 2020. Our business in India delivered $0.9bn of profit before tax last year and facilitated the equivalent of around 9% of India's exports. In the Middle East, we delivered $1.8bn of profits and were the number one bank in capital markets league tables. HSBC UK delivered $5bn of profits and was the number one bank for trade finance, while our non-ring-fenced bank in Europe delivered $2.1bn of profits and around 35% of its client business was booked outside the region. Our US business has now had nine consecutive quarters of profitability after its turnaround, while our business in Mexico delivered a return on tangible equity of 18%.

The cost savings that we have made have been reinvested in technology, which has in turn enabled us to change the way we operate as a business. Technology spending was 19% higher in 2022 than in 2019. Much of this investment has been used to rebuild and upgrade platforms, which we have then rolled out globally. Our upgraded mobile banking app is available in 24 markets and has around 13 million active users, while our upgraded digital trade finance platform has been rolled out in the UK and Hong Kong, ensuring that market-leading businesses are well positioned for the next 10 years. In 2022, we launched HSBC Orion, our new proprietary tokenisation platform using blockchain technology for bond issuances. We're also partnering with fintechs around the world to use their capabilities in our products. Finally, we are investing in greater automation, which we expect to reap the benefits from for years to come.

Empowering our people has underpinned everything that we have achieved over the past three years – and it will underpin the next phase of our strategy too. Reducing management layers has helped to increase our speed and agility. In our last staff survey, the number of colleagues who report that work processes allow them to work efficiently was 6 percentage points above the sector benchmark. Confidence within the organisation has also increased. 77% of colleagues told us they are confident about our future, which is 3 percentage points up on 2021. We have continued to make steady progress against our medium-term targets on gender and ethnicity representation, while the number of hours that colleagues spent learning about digital and data, and sustainability also increased by 13% last year, underlining the importance of these critical future skills.

The transition to net zero will offer increasingly significant commercial opportunities in the future. We have continued to make good progress towards our ambition of providing and facilitating $750bn to $1tn of sustainable financing and investment by 2030. At the end of 2022, the cumulative total for sustainable financing and investment since 2020 had reached more than $210bn. We published an updated energy policy, which commits us to no longer provide new finance or advisory services for the specific purpose of projects pertaining to new oil and gas fields and related infrastructure whose primary use is in conjunction with new fields. As per our policy, we will continue to provide finance to maintain supplies of oil and gas in line with declining current and future global demand, while accelerating our activities in support of clean energy. We have also set interim 2030 targets for on-balance sheet financed emissions for eight sectors. These include six sectors for which we have reported 2019 and 2020 emissions. We recognise that methodologies and data for measuring emissions will continue to evolve, and our own disclosures will therefore continue to develop as a result. In 2023, we will publish our first bank-wide climate transition plan.

Strong overall financial performance in 2022

The progress that we have made transforming HSBC and investing in growth has helped to drive an improved financial performance in 2022. A strong net interest income performance reflected higher global interest rates, but there was also good underlying growth across the business in key areas, particularly those linked to our international network.

Overall, the Group delivered $17.5bn of reported profit before tax, which was $1.4bn lower than in 2021. This was due to a net expected credit loss charge of $3.6bn compared with a net release of $0.9bn last year, as well as the impairment of $2.4bn relating to the planned sale of our retail banking operations in France. Adjusted profit before tax was $24bn, up $3.4bn.

Adjusted revenue was 18% higher than the same period last year, as net interest income grew strongly in all of our global businesses. There was also a strong performance in Global Foreign Exchange. Our reported return on tangible equity for 2022 was 9.9%. Excluding significant items, we delivered a return on tangible equity of 11.6%.

Future growth levers

In 2022, we continued to build new sources of value creation.

We brought in

$80bn

of net new invested assets in Wealth.

We provided and facilitated cumulatively

$210.7bn

of sustainable finance and investment since January 2020.

There was a good performance across our global businesses. In Commercial Banking, adjusted profit before tax was up by 24% to $7.7bn, driven by revenue increases across all products and in all regions, most notably Asia and the UK. Within this, Global Payments Solutions revenue grew by 104% on the back of higher interest rates, while trade revenue was up 14% with growth in all regions.

Global Banking and Markets delivered adjusted profit before tax of $5.4bn, up 8% compared with 2021. Global Payments Solutions was again the main driver, with 119% growth in net interest income from higher interest rates, and a strong performance in Global Foreign Exchange. In Wealth and Personal Banking, adjusted profit before tax of $8.5bn was 27% higher than 2021. Net interest income growth drove a good performance in Personal Banking, while there was also balance sheet growth in the UK, Asia outside Hong Kong, and Mexico.

We restricted adjusted cost growth to 1% in 2022 as a result of the significant cost-saving actions that we have taken. This represents a good outcome given the high inflation environment. After good capital generation in the fourth quarter, our CET1 ratio at the end of 2022 was 14.2% and back within our target range of 14% to 14.5%. We are able to pay a second interim dividend of $0.23 per share, bringing the total 2022 dividend to $0.32 per share.

Improved returns and substantial distribution capacity

We are firmly on track to achieve our target of a return on tangible equity of at least 12% from 2023 onwards. We have built up a good level of expected credit loss provisions, and we also expect the headwinds associated with macroeconomic uncertainty and the ongoing challenges within the China commercial real estate sector to subside, enabling expected credit losses to start to normalise.

There will be no easing off at all on costs. Our cost to achieve programme has now ended, but we will continue to seek and find opportunities to create efficiencies that will deliver sustainable cost savings in future years. We are now considering up to $300m of additional costs for severance in 2023. These costs will need to be reported in our costs line. Taking this into account, we will aim for approximately 3% cost growth in 2023. Tight cost discipline will remain a priority for the whole Group.

As a result of the improving quality of our returns, we are establishing a dividend payout ratio of 50% of reported earnings per share for 2023 and 2024, excluding material significant items. We will aim to restore the dividend to pre-Covid-19 levels as soon as possible. We also intend to revert to paying quarterly dividends from the start of 2023. Given the capital generation at the end of 2022, we will bring forward the consideration of buy-backs to the announcement of our results for the first quarter of 2023.

Finally, subject to the completion of the sale of our banking business in Canada, I am pleased that the Board will consider payment of a special dividend of $0.21 per share in early 2024 as a priority use of the surplus capital generated by the transaction. We understand the importance of dividends to our shareholders and expect them to benefit from improved capital distributions ahead.

My colleagues are getting it done

I would like to end by thanking my colleagues around the world. Over the last three years, they have managed a period of substantial change, embraced the opportunities that our transformation has presented and gone the extra mile to support our customers – all while living through a global pandemic. More recently, there have also been the Russia-Ukraine war, the real-life financial strains caused by high inflation and the devastating earthquakes in Türkiye for them to deal with. We have only made the progress that we have because of their efforts. They are exemplifying our value of getting it done, and I am proud to lead them.

Overall, 2022 was another good year for HSBC. We completed the first phase of our transformation and our international connectivity is now underpinned by good, broad-based profit generation around the world. This contributed to a strong overall financial performance. We are on track to deliver higher returns in 2023 and have built a platform for further value creation. With the delivery of higher returns, we will have increased distribution capacity, and we will also consider a special dividend once the sale of HSBC Canada is completed.

Noel Quinn
Group Chief Executive

21 February 2023

Our strategy

We are implementing our strategy across the four strategic pillars aligned to our purpose, values and ambition.

Transformation journey

We have made progress in our transformation in six key areas, as we start to improve financial performance and build a strong foundation for future growth.

Firstly, we have retained a market leading position in international connectivity. We are the number one trade finance bank and number three bank in foreign exchange globally, based on peer analysis undertaken by Coalition Greenwich. Across our global businesses, international connectivity is core to who we serve, with approximately 45% of our wholesale client business coming from cross-border relationships and approximately 6 million international customers banking with Wealth and Personal Banking. International clients remain our most attractive client base in Wealth and Personal Banking, with revenue around double that of domestic customers. In addition, global transaction banking revenue, a cornerstone of our international connectivity, has grown 7% each year since 2019.

Secondly, we have also reshaped our portfolio through strategic exits in continental Europe and the Americas. We have exited our domestic mass market retail business in the US, and are in the process of selling our retail banking operations in France, our banking business in Canada, our business in Russia and our branch operations in Greece, subject to regulatory and governmental approvals. We have taken actions to improve the returns profile of the Group, including generating cumulative gross RWA reductions of $128bn since the start of our programme, exceeding our target of more than $110bn. We have continued to reallocate capital to Asia, with the proportion of our tangible equity allocated to Asia increasing to 47% at the end of 2022, and we remain on track with our medium- to long-term aspiration to increase this to 50%. We have also invested through a series of bolt-on acquisitions in Asia, including AXA's business in Singapore and L&T Investment Management in India, and we have increased our stakes in HSBC Life China and HSBC Qianhai.

Capital allocation

Asia

(as a % of Group tangible equity)[1]

47%

2021	42%
2022	47%
Medium- to long-term aspiration	c.50%

1 Based on tangible equity of the Group's major legal entities excluding associates, holding companies, and consolidation adjustments.

Gross RWA reduction

$128bn

Since the start of the programme.
Target: >$110bn by the end of 2022.

Technology investment

$6.1bn

(2019: $5.1bn)

Thirdly, over the last three years we have built a broad and geographically diverse base of profit generation. We remain the leading bank in Hong Kong across key areas including deposits, lending and trade finance, while in mainland China, our business contributed $1.0bn of adjusted profit before tax in 2022, excluding the share of profit from our associate, Bank of Communications Co., Limited. We have also grown our businesses in the rest of Asia, with adjusted profit before tax of $4.2bn, up 24% compared with 2019. Outside of Asia, HSBC UK Bank plc delivered $5.0bn of adjusted profit before tax in 2022, while our HSBC Bank plc and US businesses have transformed into being leaner and more internationally focused. In the Middle East and North Africa, we are the leading bank in capital markets, while in Mexico, the return on average tangible equity was 18.0% in 2022.

Fourthly, we have retained our strong focus on cost discipline. Within the past year, notwithstanding inflationary pressures, we contained adjusted cost growth compared with 2021. As a result, excluding the benefit of a reduced UK bank levy, adjusted costs have remained flat since 2019, with a 19% increase in technology spend offset by gross saves within our global businesses, operations and other costs. Since 2019, we have taken actions to become a more efficient organisation, reducing our office real estate footprint by 37%, branches by 21% and operations headcount by approximately 11%.

As we transformed, we have also built a platform for growth and returns upon which we will build new value creation opportunities. We have continued to grow our balance sheet, with our deposits growing by 4% and assets growing by 5% each year since 2019. Increasing fee-based revenue and growing our Wealth and Personal Banking franchise remain important priorities for the Group, and we have gained traction, with Wealth revenue up 3% and transaction banking revenue up 7% since 2019. However, given the changes to the macroeconomic environment, together with the implementation of IFRS 17, the metrics 'Insurance and fees as a percentage of Group adjusted revenue' and 'WPB as a percentage of Group tangible equity' are no longer appropriate to measure our progress in these areas.

We continue to view technology as a key enabler of our growth ambitions, and have also increased our investment from approximately $5.1bn in 2019 to $6.1bn in 2022. During the year, we have scaled up existing digital propositions and launched others. Details of these can be found on the following pages.

Fifthly, we have supported a sustainable dividend policy with strong capital and liquidity. Finally, the above five themes have resulted in a strong platform for growth and returns, upon which we will build new value creation opportunities.

Delivery in 2022

Our strategy centres on four key pillars: focus on our areas of strengths, digitise at scale to adapt our operating model for the future, energise our organisation for growth, and support the transition to a net zero global economy.

Focus on our strengths

In our global businesses

In each of our global businesses, we continue to focus on areas where we are strongest and have opportunities to grow.

Wealth and Personal Banking

Adjusted revenue for our Wealth and Personal Banking business was $24.4bn in 2022, up 16% compared with 2021. This was driven by growth in Personal Banking, where adjusted revenue was $15.9bn, up 37%. We continued to make progress in executing our Wealth, Asset Management and Insurance strategy, attracting net new invested assets of $80bn, compared with $64bn in 2021, with $59bn coming from Asia. Our Asia Insurance value of new business reached $1.1bn, up 24%.

We continued to grow our digital propositions during the year. We launched Global Money in the UK and Australia, with the proposition now live in eight markets. This new proposition recorded approximately $11bn of transactions in 2022, enabling customers to make cheaper and faster international payments. We also signed up more than 900,000 users to our Pinnacle financial planning app to bring the total user base to over 1 million.

Within our Wealth business, in partnership with BlackRock, we launched Prism, a hybrid advisory service to help investors make more informed investment decisions.

$80bn

Net new invested assets in 2022.

Commercial Banking

Adjusted revenue for our Commercial Banking business reached $16.2bn in 2022, up 29% compared with 2021. Adjusted revenue rose in all regions, and notably in Hong Kong, which grew by 36%. Fee income increased by 8% to $3.7bn, reflecting growth in Global Payments Solutions and Global Trade and Receivables Finance.

Our digital propositions have gained significant traction, with payments processed on HSBCnet mobile increasing by nearly 62% during the year. Kinetic, our digital business banking account for SMEs in the UK, gained approximately 29,000 customers, taking its overall customer base to approximately 53,000. Business Go, our new global digital platform for SMEs, has gone live and has grown to over 95,000 users as of 2022.

In 2022, we launched our first Banking-as-a-Service proposition in the US with Oracle Netsuite, embedding HSBC's banking products within Oracle's Cloud enterprise resource planning platform.

We continue to actively help our clients with their climate transition goals, and have completed the global roll-out of our core sustainable product suite covering loans, trade finance and bonds. We also launched our enhanced HSBC Sustainability Tracker for Business Banking customers.

$3.7bn

Fee income in 2022.

Global Banking and Markets

Adjusted revenue for our Global Banking and Markets business was $15.4bn in 2022, up 10% compared with 2021, driven by strong performances in Global Payments Solutions and Markets and Securities Services, primarily from our Global Foreign Exchange business. During the year, we continued to drive efforts for cross-business line collaboration through referrals and cross-sell of products, with adjusted collaboration revenue of approximately $3.7bn in 2022, compared with approximately $3.5bn in 2021. Our Global Banking and Markets franchise remains an internationally connected one, with our clients doing business with us in multiple markets. In 2022, our clients in Europe and the Americas drove approximately $2.6bn of client business into Asia and the Middle East, an increase of approximately 30%.

We continued to develop our digital propositions with the launch of HSBC Orion, a new proprietary tokenisation platform to issue digital bonds based on distributed ledger technology.

We also extended our sustainable investment product range, launching a biodiversity screened equity index created in partnership with biodiversity data specialist Iceberg data lab and Euronext.

c.$2.6bn

Client business[1] booked in the East from clients managed in the Americas and Europe.

1 Client business differs from reported revenue as it relates to certain client-specific income, and excludes certain products (including Principal Investments, GBM 'other' and asset management), Group allocations, recoveries and other non-client-related and portfolio level revenue. It also excludes Hang Seng. GBM client business includes an estimation of client-specific day-one-trade-specific revenue from Markets and Securities Services products, which excludes ongoing mark-to-market revenue and portfolio level revenue such as hedging. Cross-border client business represents the income earned from a client's entity domiciled in a different geography than where the client group's global relationship is managed. 'Booking location' represents the geography of the client's entity or transaction booking location where this is different from where the client group's global relationship is managed.

Digitise at scale

We continued to invest in our technology and operational capabilities to drive productivity across businesses and geographies, and to improve customer experience. In 2022, $6.1bn, or 20%, of our overall adjusted operating expenses were dedicated to technology, up from $5.6bn in 2021.

Enhancing our digital propositions to improve customer engagement and journeys remains a significant priority. During the year, just under half of our Wealth and Personal Banking customers were active users of our mobile applications, an increase from 42.7% in 2021, and over 75% of our Commercial Banking customers were active on our digital applications, an increase from 71.0%. Furthermore, in Wealth and Personal Banking, nearly half of sales were generated digitally. Our customer journeys continue to be transformed, for example, in Singapore, our Wealth and Personal Banking customers can now open an account even before they arrive in their new country via their mobile phones.

To improve our operational efficiency, we continue to deploy technologies at scale in our organisation. Our Cloud adoption rate, which is the percentage of our technology services on the private or public Cloud, increased from 27% to 35%.

Energise for growth

Empowering and energising our colleagues is crucial for inspiring a dynamic culture. Our Employee engagement index, our headline measure of employee satisfaction, rose to 73% in 2022 from 67% in 2019, our baseline year. The participation rate of the survey also rose from 50% to 78%.

We remained focused on creating a diverse and inclusive environment, especially in senior leadership roles, which are those classified as band 3 and above in our global career band structure. We achieved 33.3% female representation in senior leadership positions by the end of 2022, and are on track to achieve our target of 35% by 2025. In 2022, we also set a Group-wide ethnicity strategy to better represent the communities we serve. We are on track to meet this, with 2.5% of leadership roles held by colleagues of Black heritage in 2022.

We continued to help our colleagues develop future-ready skills. In 2022, the total learning hours spent on these future-ready skills (digital, data, and sustainability) increased to approximately 375,777 hours, up from 334,651 hours in 2021.

We outline how we put our purpose and values into practice in the following 'ESG overview' section.

For further details on how we plan to energise for growth, see the Social section in the ESG review on page 73.

Transition to net zero

In November, we participated in COP27 to play our part in bringing together the public and private sector to mobilise the transition to a net zero global economy. We also made good progress on our ambitions, including expanding our financed emissions targets to eight sectors in total, reducing our greenhouse gas emissions, and supporting our customers in their transition to a net zero future including the launch of new climate solutions.

Becoming a net zero bank

We continue to pursue our climate ambition to become net zero in our operations and supply chain by 2030, and align our financed emissions to the Paris Agreement goal of net zero by 2050. In 2022, we reduced our absolute greenhouse emissions in our operations to 285,000 tonnes CO_2e, which represents a 58.5% reduction from our 2019 baseline.

So far, we have set interim 2030 targets for on-balance sheet financed emissions for eight sectors. We also published updated energy and thermal coal phase-out policies during the year, which are important mechanisms to help phase down our financed emissions in these areas while supporting our customers in their own transition plans. We plan to extend our financed emissions analysis to new sectors – shipping, agriculture, commercial real estate and residential real estate – in future disclosures. We remain committed to setting facilitated emissions targets, and aim to continue to engage with industry initiatives to produce a consistent and comparable cross-industry approach.

Supporting customers through transition

We have made progress in our ambition to support our customers through their transition to net zero. In 2022, we provided and facilitated a total of $84.2bn of sustainable finance and investments, bringing our cumulative amount since 1 January 2020 to $210.7bn of our $750bn to $1tn ambition by 2030.

Unlocking new climate solutions

In 2022, Climate Asset Management, the dedicated natural capital investment manager formed as a joint venture with climate change investment and advisory firm Pollination, achieved commitments of more than $650m across its two natural capital strategies. We also officially launched Pentagreen, a joint venture with Temasek, to finance the development of sustainable infrastructure in south-east Asia.

For further details on our climate ambition, see the Environmental section in the ESG review on page 46.

Growth and returns

Looking ahead, we will continue to build on our areas of strength, using our international connectivity and strong geographical diversity spanning every region. We will also continue to drive our transaction banking, wealth and digital platforms in order to grow fee income. Cost discipline remains a priority for us, while we drive investment in technology to increase productivity and growth. As a result, we expect to achieve more than 12% RoTE from 2023 onwards – the highest in a decade – and have substantial distribution capacity in 2023 and 2024.

ESG overview

We conduct our business to support the sustained success of our customers, people and other stakeholders.

Our approach

We are guided by our purpose: to open up a world of opportunity for our colleagues, customers and communities. Our purpose is underpinned by our values: we value difference; we succeed together; we take responsibility; and we get it done. Our purpose and values help us to deliver our strategy and unlock long-term value for our stakeholders.

Our approach to ESG is shaped by our purpose and values and a desire to create sustainable long-term value for our stakeholders. As an international bank with significant breadth and scale, we understand that our climate, economies, societies, supply chains and people's lives are interconnected. We recognise we can play an important role in tackling ESG challenges. We focus our efforts on three areas: the transition to net zero, building inclusion and resilience, and acting responsibly.

Transition to net zero
The transition to net zero is one of the biggest challenges for our generation. Success will require governments, customers and finance providers to work together. Our global footprint means that many of our clients operate in high-emitting sectors and regions that face the greatest challenge in reducing emissions. This means that our transition will be challenging but is an opportunity to make an impact.

We recognise that to achieve our climate ambition we need to be transparent on the opportunities, challenges, related risks and progress we make. To deliver on our ambition, we require enhanced processes, systems, controls, governance and new sources of data. We continue to invest in our climate resources and skills, and develop our business management process to integrate climate impacts. As we enhance our systems, processes, controls and governance, certain aspects of our reporting will rely on manual sourcing and categorisation of data. Given the challenges on data sourcing as well as the evolution of our processes as mentioned above, this has had an impact on certain climate disclosures including thermal coal. In 2023, we will continue to review our approach to our disclosures, with our reporting needing to evolve to keep pace with market developments.

We set out in more detail the steps we are taking on our climate ambitions in the ESG review on page 47.

Build inclusion and resilience
Building inclusion and resilience helps us to create long-term value. By removing barriers and being a fair and equitable bank, we can attract the best talent, serve a wider customer base and support our communities.

An inclusive, healthy and stimulating environment for our people helps us to succeed. We have set goals for gender and ethnic diversity, and we focus on employee sentiment, and support our colleagues' resilience through well-being and learning resources.

We strive to provide inclusive and accessible banking for our customers. We help our customers to build financial resilience by providing resources that help them manage their finances, and services that help them protect what they value. This is critical in challenging times, as we continue to support our stakeholders in the wake of Covid-19 and in the face of a rising cost of living.

Finally, we give back to our communities through philanthropic giving, disaster relief and volunteering.

Act responsibly
We are focused on running a strong and sustainable business that puts the customer first, values good governance, and gives our stakeholders confidence in how we do what we do. Our conduct approach guides us to do the right thing and to focus on the impact we have for our customers and the financial markets in which we operate. Customer experience is at the heart of how we operate. We aim to act responsibly and with integrity across the value chain.

On page 16, we have set out ways that we have supported our stakeholders through a challenging year.

ESG disclosure map and directory

Transition to net zero	**Our climate ambition**	Read more on our approach to the transition to net zero	Page 46
		Read more on our progress made against our ambition to achieve net zero in our financed emissions by 2050	Page 50
		Read more on our progress made against our $750bn to $1tn sustainable finance and investment ambition	Page 57
		Read more on our ambition to achieve net zero in our own operations by 2030	Page 62
	Detailed Task Force on Climate-related Financial Disclosures ('TCFD')	We make disclosures consistent with Task Force on Climate-related Financial Disclosures ('TCFD') recommendations, highlighted with the symbol: TCFD	Page 68
Build inclusion and resilience	**Diversity and inclusion disclosures**	Read more on how we are building an inclusive environment that reflects our customers and communities, and our latest pay gap statistics	Page 74
	Pay gap disclosures		Page 75
Act responsibly	**How we govern ESG**	Read more on our ESG governance approach and human rights	Page 86
	Human rights and modern slavery disclosures		Page 87
	How our ESG targets link to executive remuneration	Read more on our ESG targets embedded in executive remuneration	Page 16; Pages 282 to 287
	Our *ESG Data Pack*	Our *ESG Data Pack* provides more granular ESG information, including the breakdown of our sustainable finance and investment progress, and complaints volumes	www.hsbc.com/esg

Engaging with our stakeholders and our material ESG topics

Engaging with our stakeholders is core to being a responsible business. To determine material topics that our stakeholders are interested in, we conduct a number of activities throughout the year, including engagements outlined in the table below. Disclosure standards such as the TCFD, World Economic Forum ('WEF') Stakeholder Capitalism Metrics and Sustainability Accounting Standards Board ('SASB'), as well as the ESG Guide under the Hong Kong Stock Exchange Listing Rules and other applicable rules and regulations, are considered as part of the identification of material issues and disclosures.

Our stakeholders	How we engage	Material topics highlighted by the engagement[1]
Customers	Our customers' voices are heard through our interactions with them, surveys and by listening to their complaints	– Customer advocacy – Cybersecurity
Employees	Our colleagues' voices are heard through our employee Snapshot survey, Exchange meetings, and our 'speak-up' channels, including our global whistleblowing platform, HSBC Confidential	– Employee training – Diversity and inclusion – Employee engagement
Investors	We engage with our shareholders through our AGMs, virtual and in-person meetings, conferences and our annual investor survey	– Thermal coal policies – Energy policies – Becoming a net zero bank in our own operations and financed emissions
Communities	We welcome dialogue with external stakeholders, including non-governmental organisations ('NGOs') and other civil societies groups. We engage directly on specific issues and by taking part in external forums and working groups	– Financial inclusion and community investment
Regulators and governments	We proactively engage with regulators and governments to facilitate strong relationships through virtual and in-person meetings and by responding to consultations individually and jointly via industry bodies	– Anti-bribery and corruption – Conduct and product responsibility
Suppliers	Our code of conduct for suppliers of goods and services sets out how we engage with our suppliers on ethical and environmental performance	– Supply chain management – Human rights

1 These form part of our ESG disclosures suite together with other requirements, and are not exhaustive or exclusive to one stakeholder group. For further details on our disclosures, see our ESG review and *ESG Data Pack*, as well as our ESG reporting centre at www.hsbc.com/esg.

Supporting our customers facing a rising cost of living

We know that many of our customers around the world are facing increasing cost of living pressures from higher inflation, and we are committed to helping them.

Colleagues across our global businesses have been reaching out to customers to provide them with increased access to support, such as free financial health checks, as well as proactively contacting those who we believe could benefit from additional assistance.

Proactive support

We have focused our support on our customers in the UK, which is our largest market to be affected by rising cost of living pressures, using our guidelines and procedures to help provide the right outcomes. We also engage closely and regularly with our key regulators to help ensure we meet their expectations of financial institutions' activities more generally during volatile markets.

For our personal customers in financial difficulty, we enhanced our range of digital resources, with the launch of a new 'Rising cost of living hub' on our public website. The hub provides useful articles and tools to help budget, manage money and gain access to the range of support we are providing. Other measures in 2022 included:

- conducting a review of our existing tools and services, helping to ensure requests for borrowing remained affordable;
- helping those most in need with temporary support, such as reducing overdraft borrowing costs in eligible accounts;
- providing the opportunity to mortgage customers coming to the end of an existing fixed rate to secure a new rate earlier; and
- removing the payments of penalties for customers in need of funds having to close fixed-rate savers accounts early.

In our CMB business, our focus has been towards helping Business Banking clients exhibiting signs of financial vulnerability, as well as participating in local government-backed initiatives targeted at extending financial support to SMEs. When a customer is in need of assistance, we review on a case-by-case basis, with potential solutions including repayment holidays, extending loan repayments and offering extensions to collection periods. Other measures in 2022 included:

- improving our customer support and education, including through webinars and our financial well-being website, to guide how best to improve financial resilience and forecast cash flows;
- enhancing the identification of customers exhibiting signs of financial vulnerability, by using data and front-line insights provided from relationship management teams;
- increasing the education provided to our colleagues on the various forms of financial support available to clients; and
- proactively getting in touch with customers to help ensure awareness of available support, including communicating with over 40,000 SMEs, and increasing the number of outbound calls in the fourth quarter of 2022 by 190%, when compared with the previous quarter, to those displaying signs of lower financial resilience.

For further details on our conduct and product responsibilities, see the ESG review on page 94. For further details of how we are supporting our colleagues amid rising inflation, see page 25.

Our ESG ambitions, metrics and targets TCFD

We have established ambitions and targets that guide how we do business, including how we operate and how we serve our customers. These include targets designed to help us achieve our environment and social sustainability goals. They also help us to improve employee advocacy, the diversity of senior leadership and strengthen our market conduct. The targets for these measures are linked to the pillars of our ESG strategy: transitioning to net zero, building inclusion and resilience, and acting responsibly.

To help us achieve our ESG ambitions, a number of measures are included in the annual incentive and long-term incentive scorecards of the Group Chief Executive, Group Chief Financial Officer and Group Executives that underpin the ESG metrics in the table below.

We have developed a forward-looking roadmap to consider greater use of ESG measures in executive performance assessment. For a summary of how all financial and non-financial metrics link to executive remuneration, see pages 282 to 287 of the Directors' remuneration report.

The table below sets out some of our key ESG metrics that we use to measure our progress against our ambitions. For further details of how well we are doing, see the ESG review on page 43.

Environmental: Transition to net zero[1]

Financed emissions[2]

8 sectors

Number of sectors where we have set on-balance sheet financed emissions targets.
Ambition: Achieve net zero in our financed emissions by 2050.

Sustainable finance and investment[3]

$210.7bn

Cumulative total provided and facilitated since January 2020.
(2021: $126.7bn)
Ambition: Provide and facilitate $750bn to $1tn of sustainable finance and investment by 2030.

Net zero in our own operations[4]

58.5%

Cumulative reduction in absolute operational greenhouse gas emissions from 2019 baseline.
(2021: 50.3%)
Ambition: Achieve net zero in our own operations and supply chain by 2030.

Social: Build inclusion and resilience

Gender diversity[5]

33.3%

Women in senior leadership roles.
(2021: 31.7%)
Target: Achieve 35% women in senior leadership roles by 2025.

Ethnic diversity[5]

37% increase

Of Black colleagues in senior leadership roles from 2020 baseline.
(2021: 17.5% increase)
Target: Double the number of Black colleagues in senior leadership roles between 2020 and 2025.

Employee engagement[6]

73%

Employee engagement score.
(2021: 72%)
Target: Maintain 72% in the Snapshot Employee engagement index.

Governance: Acting responsibly

Conduct training[7]

98%

Employees who completed conduct training in 2022.
(2021: 99%)
Target: At least 98% of employees complete conduct and financial crime training each year.

Customer satisfaction[8]

4 out of 6

WPB markets that sustained top-three rank and/or improved in customer satisfaction.
(2021: 5 out of 6)
Target: To be ranked top three and/or improve customer satisfaction rank.

5 out of 6

CMB markets that sustained top-three rank and/or improved in customer satisfaction.
(2021: 2 out of 6)
Target: To be ranked top three and/or improve customer satisfaction rank

1 For further details of our approach to transition to net zero, methodology and PwC's limited assurance reports, see www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

2 See page 52 for further details on our targets for six of these sectors, which include oil and gas; power and utilities; cement; iron, steel and aluminium; aviation; and automotive. See page 66 for further details about our thermal coal mining and coal fired power targets, as well as our thermal coal phase-out policy.

3 In October 2020, we announced our ambition to provide and facilitate between $750bn to $1tn of sustainable finance and investment by 2030. For further details and breakdown, see the ESG review on page 58. For details on how this target links with the scorecards, see page 282.

4 This absolute greenhouse gas emission figure covers scope 1, scope 2 and scope 3 business travel emissions. For further details of how this target links with the scorecards, see page 282.

5 Senior leadership is classified as those at band 3 and above in our global career band structure. The progress for the ethnicity target is tracked from a 31 December 2020 baseline against our 2020 commitment to double the number of Black senior leaders. We have since refined our approach to ethnicity by focusing on targets by market. For further details, see the ESG review on page 75. For details on how this target links with the scorecards, see page 282.

6 For further details, see the ESG review on page 77. For details on how this target links with the scorecards, see page 282.

7 The completion rate shown relates to the financial crime 'Take another look' training module and conduct 'Taking responsibility' training module in 2022.

8 The markets where we report rank positions for WPB and CMB – the UK, Hong Kong, mainland China, India, Mexico and Singapore – are in line with the annual executive scorecards. This represents a change from 2021, when the metric was based on all markets where benchmarking studies were run. For further details of customer satisfaction, see the ESG review on page 89. For further details of how this target links with the scorecards, see page 282.

Task Force on Climate-related Financial Disclosures ('TCFD') TCFD

The Financial Stability Board's Task Force on Climate-related Financial Disclosures ('TCFD') recommendations set an important framework for understanding and analysing climate-related risks, and we are committed to regular, transparent reporting to help communicate and track our progress. We will advocate the same from our customers, suppliers and the industry.

We have set out our key climate-related financial disclosures throughout the *Annual Report and Accounts 2022* and related disclosures. In 2022, while recognising that further work lies ahead as we develop our management and reporting capabilities, we made certain enhancements to our disclosures. These include reporting relevant quantitative results from our first internal climate-related scenario analysis, including the carbon prices that we used. We also began to incorporate climate-related considerations into our annual financial planning cycle, and disclosed how management has considered the impact of climate-related risks on our financial position and forward-looking performance.

We have considered our 'comply or explain' obligation under the UK's Financial Conduct Authority's Listing Rules, and confirm that we have made disclosures consistent with the 11 TCFD Recommendations and Recommended Disclosures save for certain items, which we summarise below.

- For financed emissions we do not plan to set 2025 targets. We set targets in line with the Net-Zero Banking Alliance ('NZBA') guidelines by setting 2030 targets. While the NZBA define 2030 as intermediate, we use different time horizons for climate risk management. We define short term as time periods up to 2025; medium term is between 2026 and 2035; and long term is between 2036 and 2050. These time periods align to the Climate Action 100+ disclosure framework. In 2022, we disclose interim 2030 targets for on-balance sheet financed emissions for eight sectors as we outline on page 18. For the shipping sector, we chose to defer setting a baseline and target until there is sufficient reliable data to support our work, allowing us to more accurately track progress towards net zero. In March 2022, we said we would set capital markets emissions targets for the oil and gas, and power and utilities sectors based on the industry reporting standard from the Partnership for Carbon Accounting Financials ('PCAF') once published. We remain committed to setting facilitated emissions targets, and aim to continue to engage with industry initiatives to produce a consistent and comparable cross-industry approach. We intend to review the financed emissions baselines and targets annually, where relevant, to help ensure that they are aligned with market practice and current climate science.
- We do not fully disclose impacts from climate-related opportunities on financial planning and performance including on revenue, costs and the balance sheet, quantitative scenario analysis, detailed climate risk exposures for all sectors and geographies or physical risk metrics. This is due to transitional challenges in relation to data limitations. We expect these data limitations to be addressed in the medium term as more reliable data becomes available and technology solutions are implemented.
- We currently disclose partial scope 3 greenhouse gas emissions including business travel, supply chain and financed emissions. In relation to financed emissions, we published on-balance sheet financed emissions for six sectors as detailed on page 18. Future disclosure on financed emissions, and related risks is reliant on our customers publicly disclosing their carbon emissions and related risks. We aim to disclose financed emissions for additional sectors in our *Annual Report and Accounts 2023* and related disclosures. Our approach to disclosure of financed emissions for additional sectors can be found at: www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

For a full summary of our TCFD disclosures, including detailed disclosure locations for additional information, see pages 68 to 72. The additional information section on page 423 provides further detail.

Connecting international investors to sustainable solutions

We are connecting investors around the world with governments to support the transition to net zero. In May, we helped the Indonesian government raise $3.25bn in an Islamic bond, known as a sukuk, with $1.5bn of the proceeds dedicated to be used exclusively for eligible spending that delivers on the UN's Sustainable Development Goals, with guidance and support from the UNDP. We were joint lead manager and joint bookrunner, and were also mandated as joint green structuring adviser. The order book topped $10bn, with most of the buyers from Asia and the Middle East.

The deal demonstrated how our specialist expertise can build trusted relationships. We have been discussing green financing solutions with the Indonesian government since 2018 and were previously appointed to structure both its green and sustainability financing programmes.

How we measure our net zero progress TCFD

One of our strategic pillars is to support the transition to a net zero global economy. Our ambition is to align our financed emissions to the Paris Agreement goal to achieve net zero by 2050 or sooner. The Paris Agreement aims to limit the rise in global temperatures to well below 2°C, preferably to 1.5°C, above pre-industrial levels. To limit the rise in global temperatures to 1.5°C, the global economy would need to reach net zero greenhouse gas emissions by 2050.

We have set interim 2030 targets for on-balance sheet financed emissions for eight sectors. These include six sectors for which we have reported 2019 and 2020 emissions: oil and gas; power and utilities; cement; iron, steel and aluminium; aviation; and automotive. We have also set targets for thermal coal power and thermal coal mining. We remain committed to setting facilitated emissions targets, and aim to continue to engage with industry initiatives to produce a consistent and comparable cross-industry approach.

We also recognise that we require enhanced capabilities and new sources of data, as set out on page 47.

We continue to track our progress against our ambition to provide and facilitate $750bn to $1tn of sustainable finance and investment by 2030, aligned to our published data dictionary, and our ambition to achieve net zero in our own operations and supply chain by 2030. We also recognise that green finance taxonomies are not consistent globally, and evolving taxonomies and practices could result in revisions in our sustainable finance reporting going forward.

In the year ahead we plan to set interim targets for financed emissions across additional sectors and will continue our transformation programme to embed the climate transition into our core business and risk processes. We will continue to work on our climate transition plan, which will bring together – in one place – our financed emissions targets and climate strategy, with how we plan to embed this into our processes, infrastructure, governance and engagement. We plan to publish this in 2023, and update on progress annually thereafter.

We acknowledge this is a journey and recognise that regular reassessment will be needed to take into account climate scenarios, better data and revisions in reporting standards, as well as to reflect real world developments and trends. Our modelling inputs and assumptions will be impacted over time by the evolution of external parameters, such as policy and regulatory changes across our markets, technology innovation uptake, and macroeconomic events beyond our control. As a result of this, certain metrics and targets may need to be revised. In the following table, we set out our metrics and indicators and assess our progress against them.

For further details of our approach to measuring financed emissions, including scope, methodology, assumptions and limitations, see page 50.

Climate strategic pillars and ambition	Metrics and indicators	Progress to date
Becoming a net zero bank Align our financed emissions to achieve net zero by 2050 or sooner	Number of sectors analysed for financed emissions[1]	We have published on-balance sheet financed emissions for six sectors including cement; iron, steel and aluminium; aviation; and automotive. We also continue to disclose our financed emissions for the oil and gas and power and utilities sectors[2] (see pages 50 to 56).
Be net zero in our operations and supply chain by 2030 or sooner	Absolute operational greenhouse gas emissions (tonnes CO_2e)[3]	58.5% cumulative reduction in absolute greenhouse gas emissions from 2019 baseline (see page 62)
	Percentage of renewable electricity sourced across our operations	Increase from 37.5% in 2021 to 48.3% (see page 62)
	Percentage of energy consumption reduced	24.0% cumulative reduction in energy consumption from 2019 baseline (see page 62)
Supporting our customers Support our customers in their transition to net zero and a sustainable future	Sustainable finance and investment provided and facilitated ($bn)[4]	$210.7bn cumulative progress since 2020 (for further breakdown see page 58)
Unlocking new climate solutions Help transform sustainable infrastructure into a global asset class, and create a pipeline of bankable projects	Natural capital investment	Climate Asset Management, which forms part of our goal to unlock new climate solutions, received commitments of over $650m for its two strategies: the Natural Capital Strategy and the Nature Based Carbon Strategy (for further details of our approach to responsible investment, see page 60)
	Climate technology investment	Achieved our initial goal to fund $100m to climate technology companies, and subsequently raised our target to $250m (see page 60)
	Philanthropic investment to climate innovation ventures, renewable energy, and nature-based solutions	Committed $95.8m to our NGO partners since 2020, as part of the Climate Solutions Partnership (see page 84)

1 For further details of our approach and methodology, see our *Financed Emissions – Approach and Methodology Update* at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

2 Our disclosures for our 2019 emissions for our oil and gas, and power and utilities sectors have been revised. For further details, see page 55.

3 Our reported scope 3 greenhouse gas emissions of our own operations in 2022 are related to business travel. For further details on scope 1, 2 and 3, and our progress on greenhouse gas emissions and renewable energy targets, see page 63 and our *ESG Data Pack* at www.hsbc.com/esg. For further details of our methodology and PwC's limited assurance report, see www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

4 The detailed definitions of the contributing activities for sustainable finance are available in our revised *Sustainable Finance and Investment Data Dictionary 2022*. For this, together with our *ESG Data Pack* and PwC's limited assurance report, see www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Responsible business culture

We have the responsibility to help protect our customers, our communities and the integrity of the financial system. In this section, we outline our requirements under the Non-Financial Reporting Directive.

Employee matters
We are opening up a world of opportunity for our colleagues through building an inclusive organisation that values difference, takes responsibility and seeks different perspectives for the overall benefit of our customers.

At times our colleagues may need to speak up about behaviours in the workplace. We encourage colleagues to speak to their line manager in the first instance, and our annual employee Snapshot survey showed that 84% of colleagues have trust in their direct manager. We recognise that at times people may not feel comfortable speaking up through the usual channels. HSBC Confidential is our global whistleblowing channel, allowing our colleagues past and present to raise concerns confidentially and, if preferred, anonymously (subject to local laws).

We promote an environment where our colleagues can expect to be treated with dignity and respect. We are an organisation that acts where we find behaviours that fall short. Our index measuring colleagues' confidence in speaking up increased by 1 percentage point to 76% in 2022, significantly above the industry benchmark.

We aspire to be an organisation that is representative of the communities which we serve. To help achieve this, we have set commitments on the gender and ethnic diversity of our senior leadership.

We have committed to achieving a target of 35% of senior leadership roles held by women (classified as those at band 3 and above in our global career band structure) by 2025. We remain on track, having achieved 33.3% in 2022.

In July 2020, we set out our early global ethnicity commitments to double the number of Black employees in senior leadership roles. To date we have achieved a 37% increase through leadership development, inclusive hiring practices and developing the next generation of high-performing talent. We have made good progress, but we know there is more to be done.

To support our ambition, we have placed a strong focus on enhancing the quality and transparency of our ethnicity data through the expansion of our self-identification capability. As our self-disclosures improve, we can use this data to develop market-specific goals that are connected to the communities we serve.

The table below outlines high-level diversity metrics.

All employees

Male	48%
Female	52%

Senior leadership[1]

Male	67%
Female	33%

Holdings Board

Male	67%
Female	33%

1 Senior leadership is classified as those at band 3 and above in our global career band structure.

For further details of how we look after our people, including our diversity targets, transformation employee metrics and how we encourage our employees to speak up, see the Employees section of the ESG review on page 74.

Social matters
We have a responsibility to invest in the long-term prosperity of the communities where we operate. We aim to provide people with the skills and knowledge needed to thrive in the post-pandemic environment, and through the transition to a sustainable future.

For this reason, we focus our support on programmes that help develop employability and financial capability. We also support climate solutions and innovation, and contribute to disaster relief when needed. For further details of our programmes, see the 'Communities' section of the ESG review on page 83.

Human rights
Our commitment to respecting human rights, principally as they apply to our employees, our suppliers and through our financial services lending and investment, is set out in our Statement on Human Rights. This statement, along with our statements under the UK's Modern Slavery Act, is available on www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre. For further details, see the 'Human rights' section of the ESG review on page 87.

Anti-corruption and anti-bribery
We require compliance with all applicable anti-bribery and corruption laws in all markets and jurisdictions in which we operate. We set a high standard globally in our global anti-bribery and corruption policy, which also focuses on the spirit of relevant laws and regulations to help demonstrate our commitment to ethical behaviours and conduct as part of our environmental, social and corporate governance.

Environmental matters
For details of our climate ambition and carbon emission metrics, see the ESG review on page 46.

Non-financial information statement
This section primarily covers our non-financial information as required by the regulations. Other related information can be found as follows:

For further details of our key performance indicators, see page 1.
For further details of our business model, see page 4.
For further details of our principal risks and how they are managed, see pages 38 to 41.

Equipping our colleagues with sustainability skills

We are developing a range of sustainability-related resources and initiatives to help equip our colleagues with the skills to be able to support our net zero ambition. We expanded mandatory training that educates all colleagues on our approach to sustainability. In October, we launched the Sustainability Academy to equip specific colleagues with key skills to improve their understanding of topics ranging from climate change to biodiversity. We launched an ESG-themed recognition campaign through the 'At Our Best' platform that encouraged colleagues to recognise each other's ESG contributions. The campaign was well supported with nearly 200,000 unique recognitions made, an increase of 50% on the previous year's Spotlight campaign.

For further details on the Sustainability Academy, see page 82.

Board decision making and engagement with stakeholders

The Board is committed to effective engagement with all our stakeholders and seeks to understand their interests and the impacts on them when making decisions.

Section 172 (1) statement

This section, from pages 20 to 23 forms our section 172(1) statement. It describes how the Directors have performed their duty to promote the success of the company, including how they have considered and engaged with stakeholders and, in particular, how they have taken account of the matters set out in section 172(1)(a) to (f) of the Companies Act 2006.

The Board understands its fundamental role in formulating and overseeing the Group's strategy to achieve long-term success and fulfil its purpose of opening up a world of opportunity. Every scheduled Board meeting features the Group's strategy as an item of discussion. When taking principal decisions, the Directors remain mindful that the matter for consideration should be aligned to one of the four strategic pillars. For further details of our purpose, values and strategy, see pages 4 and 11 to 13.

The Board, together with senior management, have given high priority to the format and content of papers presented to the Board and its committees for their consideration. The Group Chief Executive and the Group Chairman promote best governance practice by requiring that materials contain appropriate information to allow Directors to take informed decisions in keeping with their duties. The Corporate Governance and Secretariat team supports the provision of relevant information by providing governance guidance and direction regarding the key areas for consideration in relation to section 172 factors in order to help the Directors to understand the likely consequences of their decisions long term.

The Group Chief Executive's regular report to the Board provides insights into key stakeholder sentiments by highlighting the interactions he has held with customers, regulators, employees and other stakeholders, and the importance of – and learnings from – these engagements. This informs the Board as to how the Group fosters its relationships with stakeholders and how the Group's business affects the environment and the communities it serves. Directors also participate in a variety of stakeholder engagement events, which support their understanding of key issues and challenges, which can then be factored into future decision making.

The Board recognises that to promote the Group's success, the right culture must exist throughout the organisation, be clearly understood and be consistently applied. This is supported by HSBC's values, which help us succeed together by connecting, collaborating and acting with a shared purpose. Each Board meeting begins with a 'cultural moment', which includes observations of behaviours within the Group aligned to our purpose and values. The Board and its committees also receive updates on conduct issues and any consequences for stakeholders at its meetings, in particular from the Group Chief Risk and Compliance Officer and Group Human Resources Officer. The Group's refreshed conduct approach, approved in 2021, also helps to support the consistent application of conduct principles across the organisation, acknowledging the importance of maintaining a good reputation for high standards of business conduct. For further details on the Board's oversight of culture, see the 'Corporate governance report' on page 255.

Stakeholder engagement and key considerations for the Board

The Board continued to focus on its engagement with our key stakeholders, acknowledging that this engagement is core to being a responsible business and furthers the fulfilment of our strategy. In discharging their responsibilities, the Directors sought to understand, and have regard to, the interests and priorities of the Group's key stakeholders, including in relation to material decisions that were taken by the Board during the course of the year.

Virtual and physical meetings
During 2022, the Board was able to resume its active engagement with stakeholders in person following two years of Covid-19-related restrictions. The Board met physically in several international locations, where it was able to carry out engagements with a wide range of stakeholders. For further details of how we engaged with our stakeholders, see pages 21 and 253.

We hosted our second hybrid AGM and engaged directly with our investors leading up to and during the event. The Informal Shareholders' Meeting in Hong Kong also resumed for the first time since 2019 and attracted hundreds of shareholders to attend in person to receive an update on the Group's strategy and discuss the latest financial performance with the Group Chairman, the Group Chief Executive and the Group Chief Financial Officer. We are focused on treating our shareholders fairly, by having a consistent approach to engagement and communication with them, and this approach is demonstrated by our refreshed shareholder communication policy. Such a policy helps to support the Board to act fairly between members of the company.

Doing business responsibly
Maintaining a transparent and trusting relationship with our regulators remains key to helping us ensure that we do business responsibly and that we are able to respond to challenges appropriately. In addition to continuous assessment meetings with the UK regulator (including with Board committee chairs), the Group Chairman, the Group Chief Executive and the Group Chief Financial Officer met with our regulators in the UK and Hong Kong on a regular basis. These included meetings in connection with our recovery and resolution planning, which involved several Board members engaging directly with the UK regulator. The Group Chairman and the Group Chief Executive also met regularly with government officials globally to continue to foster strong international relations. In addition, certain Board members also continued to be actively involved in climate initiatives and attend global events such as the Group Chief Executive's attendance at the COP27 Summit in Egypt.

During Board meetings, the Directors continued to balance discussions on the Group's performance, emerging risks and duties to shareholders, while remaining conscious of responsibilities to support communities and help customers. Feedback from – and engagement with – stakeholders helps inform the Board on the execution of its responsibilities.

On pages 22 and 23, we set out four examples that demonstrate how the Board made certain decisions while considering stakeholders, in accordance with the Directors' section 172 duties, and how the decisions support or accelerate the delivery of the Group's strategy.

Stakeholder engagement key events in 2022

Stakeholders	Engagement	Impact
Customers We recognise that the greater our understanding of our customers' needs, the better we can help support them to achieve their financial aims and succeed in our purpose and strategy.	– Engagement events with customers ranging from small businesses to multinational companies, in key markets. – Meetings with business customers in key industries to discuss plans regarding the transition to net zero. – Board reporting on retail customer surveys including net promoter scores and millennial retail customers' satisfaction.	– By formally and informally engaging with customers and potential customers, the Board can form a deeper understanding of why clients do business with us and how they contribute to achieving our purpose and ambition. – Meetings with clients help the Board to understand how the Group can work to achieve its commitment to transition to net zero. – Customer surveys provide insights into how our customers perceive our services and inform how we can drive meaningful improvements.
Employees We want to continue to be a positive place to work and build careers, with the success of the Group's strategy dependent upon having motivated people with the expertise and skills required to deliver it.	– Employee events, including leadership forums, webcasts, townhalls, global jams, off-sites and employee Exchanges. – Extensive interaction with employee resource groups across multiple events in many jurisdictions. – Several dedicated talent sessions, including with women and other diverse talent pools. – Next Gen gatherings for graduates, including dedicated focus group interactive sessions.	– Meeting with colleagues across jurisdictions allowed the Board to hear directly the employee voice on important issues. – These interactions helped inform the Board when it considers people matters such as career development, policies and business operations, including technology needs. Engagement also helps the Board to contextualise employee Snapshot survey results. – The appointment of a dedicated workforce engagement non-executive Director has created a different way for the employee voice to be heard and demonstrates the Board's commitment to understanding what matters to our people.
Investors We seek to understand investor needs and sentiment through ongoing dialogue and a variety of engagements with both retail and institutional investors.	– Numerous meetings with analysts and several roadshows to discuss interim and year-end results. – Remuneration Committee Chair investor meetings with top investors and proxy advisers. – Annual retail investor events such as the AGM in the UK and the Informal Shareholders' Meeting in Hong Kong.	– Regular and ad hoc interactions with institutional and retail investors allow for updates on strategy delivery, including the transition to net zero. This in turn helps the Board understand investor sentiment on material matters throughout the year. – Such engagements also serve to inform investors of key developments so that they are well informed and able to respond appropriately when significant events are communicated.
Communities We seek to play an important role in supporting the communities in which we operate through our corporate social responsibility and broader engagement activities.	– Forums and summits supporting ESG causes, such as the Glasgow Financial Alliance for Net Zero, the Financial Services Task Force of the Sustainable Markets Initiative and the World Economic Forum. – Visits to local community education facilities in the UK and Dubai to promote initiatives and collaboration, including a 'future coders' event and a local sustainability project.	– The Directors' participation at a range of community initiatives helps them to experience first-hand the positive effect the Group has on local communities as an employer, sponsor, collaborator and supporter. – The Board recognises that the Group can influence meaningful change in many ways, including by educating, encouraging broader thinking, helping to shape policy and formulating worldwide solutions, creating safe environments and achieving net zero ambitions.
Regulators and governments Maintaining constructive dialogue and relations with the relevant authorities in the markets in which we operate helps support the effective functioning of economies globally and the achievement of our strategic aims.	– Various meetings across our key markets with governmental officials, including leaders, ministers and ambassadors. – Regular meetings with our many regulators, including in the UK and Hong Kong, and elsewhere. – Meetings with non-government bodies and organisations including the European Central Bank, Bank of England, Monetary Authority of Singapore, State Bank of India, Public Investment Fund and the Bank for International Settlements.	– Frequent and varied engagement between the Board and government officials and regulators provides an opportunity for an open, two-way communication. It is also critical in ensuring that the Board understands and meets its regulatory obligations. – Meeting with international officials allows the Board to communicate the Group's strategy, perspectives and insights while ensuring that Directors remain abreast of political and regulatory trends. It also allows the Board to share perspectives on standards of best practice across industries and regions.
Suppliers We engage with suppliers, which helps us operate our business effectively and execute our strategy.	– Regular reports and updates from the Group Chief Operating Officer on supplier matters. – Meetings with existing and prospective auditors as part of the audit tender process. – A meeting with customers (who are also our suppliers) in the Middle East. – Interactive sessions with catering and real estate suppliers including on their net zero plans.	– Meeting with our suppliers helps Directors understand our suppliers' challenges and how we can work collaboratively to succeed, particularly in achieving our net zero ambitions. – It is key for the Board to understand the Group's supply chain and how suppliers' operations are aligned to our purpose and values. – This supports the Board when approving its Modern Slavery Act Statement.

Principal decisions

The Board operates having regard to the duties of the Directors, including the relevant matters set out in section 172(1)(a)-(f) of the Companies Act 2006. The following examples demonstrate how these Board decisions, taken in 2022, align to each of our four strategic pillars.

Focus on our strengths

The Board undertook a strategic review of the Group's Canada business in support of the Group's strategic aims.

The Board, together with senior management, keep under review potential inorganic opportunities to help accelerate the delivery of our strategy and deliver value for shareholders. In 2022, to further the Group's strategy and ambition, and following a strategic review, the Board took the decision for the Group to sell its Canadian business to Royal Bank of Canada.

The review considered HSBC Canada's relatively low market share and whether it was in the Group's best interests to invest in HSBC Canada's expansion and growth in the context of opportunities in other markets. It was concluded that the best course of strategic action was for the Group to sell HSBC Canada. The Board's decision to approve the sale was aligned to the Group's strategic pillar of focus on our strengths.

The implications of the transaction for several key stakeholders were considered and many stakeholders were engaged with, including Canadian government officials and regulators in both the UK and Canada. Financial and legal advisers were engaged throughout the process to provide specialist advice to help inform the Board's understanding and allow it to take a decision. Transaction terms were carefully negotiated to provide certainty for the Group's employees in Canada. The Board also acknowledged that completion of the transaction would require engagement with additional key stakeholders, including employees, customers and suppliers.

The Board considered there to be a number of benefits to the disposal, including simplifying the Group structure and helping to further the aim of becoming a market leader in wealth management, with a particular focus on Asia. In addition, the transaction would unlock significant value for the Group and realise a good return for our shareholders.

For the reasons set out above, in taking this decision, the members of the Board exercised their statutory duties including the duty to act in the way that they considered, in good faith, would be most likely to promote the long-term success of the company for the benefit of its members as a whole.

Energise for growth

The Board approved a review of its headquarters' office location in London to support its employees in creating a more dynamic and agile environment in which to work.

Our strategic pillar, energise for growth, includes a commitment to inspire a dynamic culture where the best talent want to work. Throughout the Covid-19 pandemic, we saw how we could continue to deliver our work commitments through a hybrid working model and the value that hybrid working brings for our clients and colleagues. Our workstyle approach is helping us to attract and retain diverse talent, while enabling us to reduce our office footprint.

We want our head office to connect people, drive collaboration, foster alternative workstyles and promote well-being. With this in mind, in September 2022, the Board considered a proposal to review the location of our global headquarters. While we are committed to remain in London, the success of hybrid working has meant our workspace requirements are changing, creating the opportunity to drive a new real estate model fit for a modern bank.

The views from several stakeholders helped to shape this key decision. Employee surveys provided evidence to support hybrid working, which informed the decision to review the global headquarters location. The Board recognised the importance of taking this decision early enough to provide sufficient notice to relevant suppliers, including the affected landlords, to best prepare for any changes. Our UK regulators were also engaged with in good time to ensure that they were informed of our intentions to stay in London.

An important Board consideration factored into the new office environment review included that it should be more digitally enabled, so as to help us work smarter and develop future-ready skills. The Board also acknowledged that the new office environment should be designed in a sustainable way to help meet our net zero commitments. In taking this decision, the Board focused on its strategic aspiration to have a more flexible and dynamic workspace that meets the needs of everyone. The Board took into account the section 172 factors along with the relevant stakeholder engagement, which informed its decision to commence the review with a view to best promote the success of the company for the long term.

Transition to net zero

The Board remained active and directly engaged on the Group's response to the climate change agenda, agreeing an updated energy policy aligned to our ambition to support the transition to a net zero global economy.

The Board has remained focused on its commitments, following the climate change resolution passed at the 2021 AGM, to support our customers on their transitions to a low-carbon future.

In 2022, the Board approved an update to the thermal coal phase-out policy. It also approved the publication of an updated energy policy, which was considered well aligned to our strategic approach to transition to net zero. The energy policy seeks to balance three objectives: driving down global greenhouse gas emissions; the need to enable an orderly transition that builds resilience in the longer term; and the need to support a just and affordable transition. In developing this policy, the Board was informed of the engagement undertaken with several internal and external stakeholders including: governments, major clients, large institutional investors and leading scientific and international bodies and industry participants. The Board took into consideration the active role we are seeking to play in supporting and accelerating the energy transition in the markets we serve and the crucial importance of engaging with our customers on their own transition plans. The Board also considered the long-term impacts of the policy on its stakeholders including the need to balance the responsibility of facilitating a just transition, helping to ensure continued access to affordable energy sources in the markets we serve, and supporting an accelerated transition.

Since publication of the energy policy, stakeholder engagement has continued, including with key institutional investors to discuss the policy, its impacts and alignment with our ambition to help finance our clients' transition to net zero. Extensive engagement also continues to take place among employees and with clients as we begin the implementation of the policy.

In taking the decision to approve the energy policy and in overseeing the Group's climate commitments, the Board gave due regard to the section 172 factors, in particular the impact of the decision on the environment and communities the company serves, our continuing valuable relationships with customers and investors, and the long-term success of the company.

Digitise at scale

The Group is committed to creating and delivering on fast, easy, digital customer experiences.

The Group's digital strategy aims to ensure that ways of working for colleagues, as well as the experience of our customers, are technologically advanced and efficient. Digitise at scale means we are focused on creating and delivering fast, easy, digital customer experiences by partnering with technology innovators and working together to enable new customer benefits. The Board's oversight of our digital strategies and policies is important given that these are critical in helping to ensure the Group's resiliency and customer security.

The Group Chief Executive regularly reports to the Board on his engagements with – and feedback from – customers on the Group's digital strategy progress. The Board has engaged with many customers over the past year, and is focused on ensuring that our customers' experiences meet their expectations. Customer survey insights throughout 2022 have been used to deepen understanding of the digital landscape challenges customers face, and to help drive solutions. Consequently, the Group has led several key digital customer deliveries in 2022, with approximately 49% of customers being mobile active and around 48% of retail sales being performed through digital channels. Delivery of these new initiatives improved customer experiences across our global markets in 2022, and supported the Group's efforts to execute at speed and automate at scale – a cornerstone of our strategy.

The Board also receives updates from the Group Chief Operating Officer on the various ways the Group is furthering its digital strategy. Vision 27, which is our long-term technology strategy, featured regularly on the Board agenda and was launched at the beginning of 2022. Its aim is to help transform HSBC into a digital-first bank over the next five years. One of the Vision 27 initiatives is the development of a digital technology map, which is a bespoke tool developed to capture all of the Group's applications and systems and provide insight and data points on these including usage by businesses, regions and entities. The Board and the Technology Governance Working Group have also challenged management on the prioritisation of digital initiatives, as well as the demise of legacy and non-strategic applications, as part of efforts to streamline the large and complex technology architecture. This is a key focus in helping to improve the resiliency and efficiency of our systems for colleagues and customers.

In taking these decisions, whether by the Board directly, or the business through its delegated authority, the digital needs of customers and employees are taken into account in order to create long-term success of the company and become a truly data-led organisation.

Remuneration

Our remuneration policy supports the achievement of our strategic objectives by aligning reward with our long-term sustainable performance.

Our remuneration approach

We have refreshed our reward strategy and proposition for the workforce in response to the new or elevated challenges we are facing as we move beyond the Covid-19 pandemic, including the cost of living pressures many of our colleagues are experiencing. The commitments we make to colleagues are critical to support us in energising for growth and delivering sustainable performance.

For further details of what we did during 2022 to help ensure remuneration outcomes were consistent with this approach, see page 292.

Remuneration for our executive Directors

Our current remuneration policy for executive Directors was approved by 96% of our shareholders at our AGM in 2022 and will apply for a maximum of three years until the AGM in 2025. We made no changes to the remuneration structure or to the maximum opportunity payable for each element of remuneration. Details of the policy can be found on pages 257 to 265 of our previous *Annual Report and Accounts 2021*.

The table below shows the amount our executive Directors earned in 2022. For details of Directors' pay and performance for 2022, see the Directors' remuneration report on page 282.

Single figure of remuneration

	Noel Quinn		Ewen Stevenson	
(£000)	**2022**	2021	**2022**	2021
Base salary	**1,329**	1,288	**775**	751
Fixed pay allowance	**1,700**	1,700	**1,085**	1,062
Cash in lieu of pension	**133**	129	**77**	75
Taxable benefits	**119**	95	**7**	3
Non-taxable benefits	**86**	71	**50**	42
Total fixed	**3,367**	3,283	**1,994**	1,933
Annual incentive	**2,164**	1,590	**1,091**	978
Notional returns	**31**	22	**—**	—
Replacement award	**—**	—	**1,180**	754
Long-term incentive	**—**	—	**436**	—
Total variable	**2,195**	1,612	**2,707**	1,732
Total fixed and variable	**5,562**	4,895	**4,701**	3,665

Notes and commentary related to this table are provided in the Directors' remuneration report on page 284.

Remuneration for our executive Directors continued

Variable pay for our executive Directors is driven primarily by achievement against performance scorecards, with measures and targets set by the Group Remuneration Committee at the start of the year to align pay outcomes with the delivery of our strategy and plan. After the formulaic scorecard outcome was determined, the Group Remuneration Committee applied a downward adjustment of 5% and 15% to Noel Quinn's and Ewen Stevenson's 2022 annual incentive outcomes, respectively, to take into account specific risk matters around capital management in the year. Further details are provided in the Directors' remuneration report.

Executive Directors' annual incentive scorecard outcome
(% of maximum opportunity)

Group Chief Executive	**75.35%**
Group Chief Financial Officer	**65.15%**

Remuneration for our colleagues

Variable pay pool

($m)

2022	**3,359**
2021	3,495

The Group Remuneration Committee determined an overall variable pay pool for Group employees of $3,359m (2021: $3,495m). This followed a review of our performance against financial and non-financial metrics set out in the Group risk framework. The Group Remuneration Committee considered our 2022 financial performance, with a 17% increase in adjusted profit before tax, return on average tangible equity of 9.9% and costs slightly up year on year. The Group Remuneration Committee also considered the external environment, the challenging economic outlook and projected outcomes across the market to ensure we remain competitive to attract and retain talent.

The distribution of the pool was differentiated by business performance. Overall year-on-year variable pay outcomes were strongest in CMB, followed by WPB but down in GBM to reflect relative performance. There was robust differentiation for individual performance so that our highest performers received meaningful variable pay increases compared with the previous year. We have protected variable pay for junior colleagues, which is up on average, recognising the inflationary and cost of living challenges experienced across most of our markets.

In determining 2023 fixed pay increases, we considered the impact of inflation in each country where we operate. Increases were targeted towards more junior and middle management colleagues as fixed pay is a larger proportion of their overall pay. Across the Group, there was an overall increase of 5.5% in fixed pay, compared with 3.6% for 2022. The level of increases varies by country, depending on the economic situation and individual roles. There were no fixed pay increases for most of our senior leaders, including our executive Directors.

For details of how the Group Remuneration Committee sets the pool, see page 276.

Supporting our colleagues during 2022

We know that many colleagues around the world are facing different pressures, and we are committed to supporting them, adapting our approach according to the market.

For colleagues who are still significantly impacted by the pandemic, for example in mainland China and Hong Kong, we provided care packages and increased well-being sessions. In mainland China, we also delivered food essentials and provided inconvenience allowances. Separately, in Argentina and Türkiye, we made regular adjustments to fixed pay given the continuing inflationary pressures. In Sri Lanka, we made one-off payments and fixed pay increases during the year to address high inflation. In the UK, we provided almost 17,000 junior colleagues with a one-off payment of £1,500 to help with energy cost pressures. We have continued to provide a wide range of resources to all our colleagues globally, including wider support on financial guidance, employee assistance programmes and access to hardship funds.

For further details of how we are supporting colleague well-being, see page 80.

Financial overview

In assessing the Group's financial performance, management uses a range of financial measures that focus on the delivery of sustainable returns for our shareholders and maintaining our financial strength.

Executive summary

Financial performance in 2022 was supported by a rise in global interest rates, which materially improved our net interest income, and we maintained our strong focus on cost discipline, despite inflationary pressures and continued investment. While our revenue outlook remains positive, there are continued risks around inflation and increasing macroeconomic uncertainty in many of the markets in which we operate.

Reported profit after tax for 2022 of $16.7bn was 13% higher, which included an effective tax rate charge of 4.9% due to the benefit of credits related to the recognition of deferred tax assets. Our return on average tangible equity ('RoTE') improved by 1.6 percentage points to 9.9%. Reported profit before tax of $17.5bn decreased by 7%, which included an impairment of $2.4bn following the reclassification of our retail banking operations in France to held for sale, as well as a more normalised charge for expected credit losses ('ECL'), compared with a net release in 2021. These reductions were mitigated by the favourable impact of higher interest rates on reported revenue and a reduction in reported operating expenses, primarily due to the favourable impact of foreign currency translation differences.

The Group CET1 capital ratio fell 1.6 percentage points to 14.2% at 31 December 2022. In addition, customer deposit and lending balances both fell compared with 31 December 2021, reflecting the reclassification to held for sale of balances, notably from our retail banking operations in France and our banking business in Canada, as well as from the adverse impact of foreign currency translation differences. Notwithstanding these impacts, there was mortgage growth in the UK and Hong Kong, which mitigated a reduction in term lending in CMB in Hong Kong.

Group financial targets

Return on average tangible equity

9.9%

(2021: 8.3%)

In 2022, RoTE was 9.9%, an increase of 1.6 percentage points from 2021.

Despite increasing macroeconomic uncertainty, the impact of our growth and transformation programmes, together with the positive revenue outlook, give us confidence in achieving our RoTE target of at least 12% for 2023 onwards.

Adjusted operating expenses

$30.5bn

(2021: $30.1bn)

During 2022, we continued to demonstrate strong cost discipline, despite inflationary pressures. We achieved 1% growth in adjusted operating expenses compared with 2021, relative to our target of broadly stable adjusted operating expenses.

Our cost to achieve programme concluded on 31 December 2022. Cumulatively, since the start of the programme in 2020, we have realised gross savings of $5.6bn, with cost to achieve spend of $6.5bn. We expect approximately $1bn of additional gross cost saves from this programme in 2023, due to actions taken in 2022.

We retain our focus on cost discipline and will target 2023 adjusted cost growth of approximately 3% on an IFRS 4 basis. This includes up to $300m of additional severance costs in 2023, which we expect to generate further efficiencies into 2024. There may also be an incremental adverse impact from retranslating the 2022 results of hyperinflationary economies at constant currency.

Gross risk-weighted asset reductions

$128bn

Since the start of the programme.

At 31 December 2022, the Group had delivered cumulative gross RWA reductions of $128bn, relative to our target to achieve gross RWA reductions of $110bn or more by the end of 2022. This included accelerated saves of $9.6bn made in 2019. This programme concluded on 31 December 2022.

Capital and dividend policy

CET1 ratio 14.2%

Dividend payout ratio 44%

At 31 December 2022, our common equity tier 1 ('CET1') capital ratio was 14.2%, down 1.6 percentage points from 31 December 2021. Having fallen below 14% during 2022, we are back within our medium-term CET1 target range of 14% to 14.5%. We intend to continue to manage capital efficiently, returning excess capital to shareholders where appropriate.

The Board has approved a second interim dividend for 2022 of $0.23 per ordinary share. The total dividend per share in 2022 of $0.32 results in a dividend payout ratio of 44%, relative to our 2022 target range of between 40% and 55% from 2022 onwards. In determining our dividend payout ratio for 2022, the impairment on the planned sale of our retail banking operations in France, the $1.8bn impact from the recognition of a deferred tax asset for the UK tax group and HSBC Canada's financial results from the 30 June 2022 net asset reference date are excluded from the reported earnings per share.

We are establishing a dividend payout ratio of 50% for 2023 and 2024, excluding material significant items (including the planned sale of our retail banking operations in France and the planned sale of our banking business in Canada), with consideration of buy-backs brought forward to our first quarter results in May 2023, subject to appropriate capital levels. We also intend to revert to paying quarterly dividends from the first quarter of 2023.

Subject to the completion of the sale of our banking business in Canada, the Board's intention is to consider the payment of a special dividend of $0.21 per share as a priority use of the proceeds generated by completion of the transaction. A decision in relation to any potential dividend would be made following the completion of the transaction, currently expected in late 2023, with payment following in early 2024. Further details in relation to record date and other relevant information will be published at that time. Any remaining additional surplus capital is expected to be allocated towards opportunities for organic growth and investment alongside potential share buy-backs, which would be in addition to any existing share buy-back programme.

Key financial metrics

	For the year ended		
Reported results	**2022**	2021	2020
Reported profit before tax ($m)	**17,528**	18,906	8,777
Reported profit after tax ($m)	**16,670**	14,693	6,099
Cost efficiency ratio (%)	**64.4**	69.9	68.3
Net interest margin (%)	**1.48**	1.20	1.32
Basic earnings per share ($)	**0.75**	0.62	0.19
Diluted earnings per share ($)	**0.74**	0.62	0.19
Dividend per ordinary share (in respect of the period) ($)	**0.32**	0.25	0.15
Dividend payout ratio (%)[1]	**44**	40	79
Alternative performance measures			
Adjusted profit before tax ($m)	**24,010**	20,603	11,695
Adjusted cost efficiency ratio (%)	**55.0**	64.0	62.3
Expected credit losses and other credit impairment charges ('ECL') as % of average gross loans and advances to customers (%)	**0.36**	(0.08)	0.87
Expected credit losses and other credit impairment charges ('ECL') as % of average gross loans and advances to customers, including held for sale (%)[2]	**0.35**	(0.08)	0.87
Return on average ordinary shareholders' equity (%)	**8.7**	7.1	2.3
Return on average tangible equity (%)	**9.9**	8.3	3.1

	At 31 December		
Balance sheet	**2022**	2021	2020
Total assets ($m)	**2,966,530**	2,957,939	2,984,164
Net loans and advances to customers ($m)	**924,854**	1,045,814	1,037,987
Customer accounts ($m)	**1,570,303**	1,710,574	1,642,780
Average interest-earning assets ($m)	**2,203,639**	2,209,513	2,092,900
Loans and advances to customers as % of customer accounts (%)	**58.9**	61.1	63.2
Total shareholders' equity ($m)	**187,484**	198,250	196,443
Tangible ordinary shareholders' equity ($m)	**149,355**	158,193	156,423
Net asset value per ordinary share at period end ($)	**8.50**	8.76	8.62
Tangible net asset value per ordinary share at period end ($)	**7.57**	7.88	7.75
Capital, leverage and liquidity			
Common equity tier 1 capital ratio (%)[3]	**14.2**	15.8	15.9
Risk-weighted assets ($m)[3,4]	**839,720**	838,263	857,520
Total capital ratio (%)[3,4]	**19.3**	21.2	21.5
Leverage ratio (%)[3,4]	**5.8**	5.2	5.5
High-quality liquid assets (liquidity value) ($bn)[4,5]	**647**	688	678
Liquidity coverage ratio (%)[4,5]	**132**	139	139
Net stable funding ratio (%)[4,5]	**136**	N/A	N/A
Share count			
Period end basic number of $0.50 ordinary shares outstanding (millions)	**19,739**	20,073	20,184
Period end basic number of $0.50 ordinary shares outstanding and dilutive potential ordinary shares (millions)	**19,876**	20,189	20,272
Average basic number of $0.50 ordinary shares outstanding (millions)	**19,849**	20,197	20,169

For reconciliations of our reported results to an adjusted basis, including lists of significant items, see page 109. Definitions and calculations of other alternative performance measures are included in our 'Reconciliation of alternative performance measures' on page 128.

1 Dividend per share, in respect of the period, as a percentage of earnings per share adjusted for certain items (recognition of certain deferred tax assets: $0.11 reduction in EPS; planned sales of the retail banking operations in France and banking business in Canada: $0.09 increase in EPS). No items were adjusted in 2021 or 2020.

2 Includes average gross loans and advances to customers reported within 'assets held for sale'.

3 Unless otherwise stated, regulatory capital ratios and requirements are based on the transitional arrangements of the Capital Requirements Regulation in force at the time. These include the regulatory transitional arrangements for IFRS 9 'Financial Instruments', which are explained further on page 208. Leverage ratios are reported based on the disclosure rules in force at that time, and include claims on central banks. Current period leverage metrics exclude central bank claims in accordance with the UK leverage rules that were implemented on 1 January 2022. References to EU regulations and directives (including technical standards) should, as applicable, be read as references to the UK's version of such regulation or directive, as onshored into UK law under the European Union (Withdrawal) Act 2018, and as may be subsequently amended under UK law.

4 Regulatory numbers and ratios are as presented at the date of reporting. Small changes may exist between these numbers and ratios and those subsequently submitted in regulatory filings. Where differences are significant, we will restate in subsequent periods.

5 The liquidity coverage ratio is based on the average value of the preceding 12 months. The net stable funding ratio is based on the average value of four preceding quarters. The LCR in December 2021 has been restated for consistency. We have not restated the prior periods for NSFR as no comparatives are available.

Reported results

Reported profit
Reported profit after tax of $16.7bn was $2.0bn or 13% higher than in 2021, and included a $2.2bn credit arising from the recognition of a deferred tax asset from historical tax losses in HSBC Holdings. It also benefited from other deferred tax asset and uncertain tax position reassessments, resulting in an effective tax rate of 5%.

Reported profit before tax of $17.5bn was $1.4bn or 7% lower than in 2021. The decrease reflected a net ECL charge of $3.6bn in 2022, which included stage 3 charges of $2.2bn, in part relating to the commercial real estate sector in mainland China, as well as from the impact of heightened economic uncertainty, inflation and rising interest rates. This compared with a net release of $0.9bn in 2021. This adverse movement in reported ECL was partly offset by higher reported revenue and lower reported operating expenses.

The increase in reported revenue primarily reflected higher net interest income from the positive impact of interest rate rises on all of our global businesses. This was partly offset by an impairment of $2.4bn recognised following the reclassification of our retail banking operations in France as held for sale on 30 September 2022, an adverse impact of foreign currency translation differences and unfavourable market impacts in life insurance manufacturing in WPB. Lower reported operating expenses primarily reflected the favourable impact of foreign currency translation differences, while restructuring and other related costs increased.

Effective 1 January 2023, IFRS 17 'Insurance Contracts' sets the requirements that an entity should apply in accounting for insurance contracts it issues and reinsurance contracts it holds. IFRS 17 replaces IFRS 4 and could have a significant adverse impact on the profitability of our insurance business on transition. For further details of the impact of IFRS 17 on the results of our insurance operations, see page 335.

Reported revenue
Reported revenue of $51.7bn was $2.2bn or 4% higher than in 2021, primarily due to an increase in net interest income from the positive impact of interest rate rises, mainly in Global Payments Solutions ('GPS') in CMB and GBM, and in Personal Banking in WPB. In GBM, Global Foreign Exchange revenue benefited from increased client activity due to elevated levels of market volatility. In addition, there were strong sales in our life insurance manufacturing business in WPB, with growth in the value of new business, while insurance revenue also included a gain following a pricing update for our policyholders' funds held on deposit with us in Hong Kong to reflect the cost to provide this service.

Reported results	2022 $m	2021 $m	2020 $m
Net operating income before change in expected credit losses and other credit impairment charges ('revenue')	**51,727**	49,552	50,429
Change in expected credit losses and other credit impairment charges	**(3,592)**	928	(8,817)
Net operating income	**48,135**	50,480	41,612
Total operating expenses	**(33,330)**	(34,620)	(34,432)
Operating profit	**14,805**	15,860	7,180
Share of profit in associates and joint ventures	**2,723**	3,046	1,597
Profit before tax	**17,528**	18,906	8,777
Tax expense	**(858)**	(4,213)	(2,678)
Profit after tax	**16,670**	14,693	6,099

These increases were partly offset by an impairment of $2.4bn recognised following the reclassification of our retail banking operations in France as held for sale on 30 September 2022, as well as losses of $0.4bn associated with the planned sales of our branch operations in Greece and our business in Russia. Reported revenue included an adverse impact of foreign currency translation differences of $3.1bn, and unfavourable market impacts in life insurance manufacturing in WPB of $1.0bn, compared with favourable movements in 2021 of $504m. There was also a decrease in Markets Treasury revenue, which is allocated to our global businesses, due to lower net interest income from the impact of rising interest rates on our funding costs and flattening yield curves across all regions, as well as from lower disposal gains related to risk management activities.

Lower net fee income reflected a reduction in investment distribution income in WPB due to muted customer sentiment resulting in reduced activity in equity markets, and Covid-19-related restrictions in Hong Kong in early 2022, which resulted in the temporary closure of parts of our branch network. Since then, restrictions have substantially been eased. Additionally in GBM, there were lower fees in Capital Markets and Advisory, in line with the reduced global fee pool. In Principal Investments, lower revaluation gains resulted in a reduction in revenue relative to 2021.

Reported ECL
Reported ECL were a net charge of $3.6bn, which included stage 3 charges of $2.2bn, in part relating to the commercial real estate sector in mainland China. We also recognised additional stage 1 and stage 2 allowances to reflect heightened levels of economic uncertainty, inflation, supply chain risks and rising interest rates, in part offset by the release of most of our remaining Covid-19-related allowances. This compared with a net release of $0.9bn in 2021 relating to Covid-19-related allowances previously built up in 2020.

For further details of the calculation of ECL, see pages 153 to 162.

Reported operating expenses
Reported operating expenses of $33.3bn were $1.3bn or 4% lower than in 2021, primarily as foreign currency translation differences resulted in a favourable impact of $2.2bn, as well as from the non-recurrence of a 2021 goodwill impairment of $0.6bn related to our WPB business in Latin America.

Reported operating expenses also reflected the impact of ongoing cost discipline across the Group. This helped mitigate the cost of increased investment in technology of $0.5bn, which included investments in our digital capabilities, as well as the impact of business volume growth and inflation. Restructuring and other related costs increased by $1.0bn.

Reported share of profit from associates and joint ventures
Reported share of profit from associates and joint ventures of $2.7bn was $0.3bn or 11% lower than in 2021, primarily as 2021 included a higher share of profit from Business Growth Fund ('BGF') due to the recovery in asset valuations. This was partly offset by an increase in the share of profit from The Saudi British Bank ('SABB').

Tax expense
Tax in 2022 was a charge of $0.9bn and included a $2.2bn credit arising from the recognition of a deferred tax asset from historical tax losses in HSBC Holdings. This was a result of improved profit forecasts for the UK tax group, which accelerated the expected utilisation of these losses and reduced uncertainty regarding their recoverability. We also benefited from other deferred tax asset and uncertain tax position reassessments during 2022. Excluding these, the effective tax rate for 2022 was 19.2%, which was 3.1 percentage points lower than in 2021. The effective tax rate for 2022 was decreased by the remeasurement of deferred tax balances following the substantive enactment in the first quarter of 2022 of legislation to reduce the rate of the UK banking surcharge from 8% to 3% from 1 April 2023.

Adjusted performance

Our reported results are prepared in accordance with IFRSs, as detailed in the financial statements on page 335.

We also present alternative performance measures (non-GAAP financial measures). These include adjusted performance, which we use to align internal and external reporting, identify and quantify items management believes to be significant, and provide insight into how management assesses period-on-period performance. Alternative performance measures are highlighted with the following symbol:

To derive adjusted performance, we adjust for:

- the year-on-year effects of foreign currency translation differences; and
- the effect of significant items that distort year-on-year comparisons, which are excluded to improve understanding of the underlying trends in the business.

The results of our global businesses are presented on an adjusted basis, which is consistent with how we manage and assess global business performance.

For reconciliations of our reported results to an adjusted basis, including lists of significant items, see page 109. Definitions and calculations of other alternative performance measures are included in our 'Reconciliation of alternative performance measures' on page 128.

	2022	2021	2020	2022 vs 2021	
Adjusted results	**$m**	$m	$m	**$m**	**%**
Net operating income before change in expected credit losses and other credit impairment charges ('revenue')	**55,345**	47,020	48,848	**8,325**	**18**
Change in expected credit losses and other credit impairment charges	**(3,592)**	754	(8,815)	**(4,346)**	**>(200)**
Total operating expenses	**(30,466)**	(30,104)	(30,445)	**(362)**	**(1)**
Operating profit	**21,287**	17,670	9,588	**3,617**	**20**
Share of profit in associates and joint ventures	**2,723**	2,933	2,107	**(210)**	**(7)**
Profit before tax	**24,010**	20,603	11,695	**3,407**	**17**
Tax	**(4,287)**	(4,241)	(3,274)	**(46)**	**(1)**
Profit after tax	**19,723**	16,362	8,421	**3,361**	**21**

Adjusted profit before tax

Adjusted profit after tax of $19.7bn was $3.4bn or 21% higher than in 2021.

Adjusted profit before tax of $24.0bn was $3.4bn or 17% higher than in 2021, reflecting higher adjusted revenue, mainly from net interest income growth following global interest rate rises. This increase was partly offset by an ECL charge in 2022, compared with a net release in 2021. The ECL charge in 2022 reflected stage 3 charges, as well as the impact of heightened economic uncertainty, inflation, supply chain risks and rising interest rates. Adjusted profit from associates and joint ventures decreased, while adjusted operating expenses increased by 1% compared with 2021, reflecting investment in technology mitigated by continued cost discipline.

Adjusted revenue

Adjusted revenue of $55.3bn was $8.3bn or 18% higher than in 2021. The increase was driven by net interest income growth of $7.7bn following global interest rate rises, mainly in GPS in CMB and GBM, and Personal Banking in WPB. Global Foreign Exchange in GBM benefited from increased client activity due to elevated levels of market volatility, and there were strong sales in our insurance business in WPB, with the value of new business up by $0.2bn or 23%. In addition, insurance revenue included a $0.3bn gain following a pricing update for our policyholders' funds held on deposit with us in Hong Kong to reflect the cost to provide this service.

Reconciliation of reported profit before tax to adjusted profit after tax

	2022	2021	2020
	$m	$m	$m
Reported profit before tax	**17,528**	18,906	8,777
Currency translation	**—**	(1,180)	(303)
Significant items:	**6,482**	2,877	3,221
– customer redress programmes	**(39)**	38	(33)
– disposals, acquisitions and investment in new businesses	**2,817**	—	10
– fair value movements on financial instruments	**579**	242	(264)
– impairment of goodwill and other intangibles	**(4)**	587	1,090
– past service costs of guaranteed minimum pension benefits equalisation	**—**	—	17
– restructuring and other related costs	**3,129**	2,143	2,078
– settlements and provisions in connection with legal and regulatory matters	**—**	—	12
– goodwill impairment (share of profit in associates and joint ventures)	**—**	—	462
– currency translation on significant items	**—**	(133)	(151)
Adjusted profit before tax	**24,010**	20,603	11,695
Adjusted tax charge[1]	**(4,287)**	(4,241)	(3,274)
Adjusted profit after tax	**19,723**	16,362	8,421

1 For a reconciliation of reported to adjusted tax charge, see page 109.

Adjusted performance continued

These increases in adjusted revenue were partly offset by a net unfavourable movement in market impacts in life insurance manufacturing in WPB of $1.4bn. In addition, lower net fee income reflected a reduction in investment distribution income, as muted customer sentiment led to reduced activity in equity markets, and Covid-19-related restrictions in Hong Kong in early 2022 resulted in the temporary closure of parts of our branch network. Since then, restrictions have substantially been eased. In GBM, there were lower fees in Capital Markets and Advisory revenue, in line with the reduced global fee pool. In Principal Investments, revenue fell due to lower revaluation gains relative to 2021.

Revenue relating to Markets Treasury decreased by $0.7bn due to lower net interest income from the impact of rising interest rates on our funding costs and flattening yield curves across all regions, as well as from lower disposal gains related to risk management activities. This revenue is allocated to our global businesses.

Adjusted ECL

Adjusted ECL were a net charge of $3.6bn, which included stage 3 charges of $2.2bn, in part relating to the commercial real estate sector in mainland China. The charge also included stage 1 and stage 2 allowances to reflect heightened economic uncertainty, inflation, supply chain risks and rising interest rates, in part offset by the release of most of our remaining Covid-19-related allowances. The net ECL release of $0.8bn in 2021 related to Covid-19 allowances previously built up in 2020.

Adjusted operating expenses

Adjusted operating expenses of $30.5bn were 1% higher compared with 2021, as we actively managed the impact of inflation on our cost base through ongoing cost discipline. These reductions helped mitigate an increase from continued investment in technology of $0.5bn, which included investments in our digital capabilities, as well as growth due to business volume-related cost growth and the impact of inflation. Adjusted operating expenses also included the adverse impact of retranslating the prior year results of our operations in hyperinflationary economies at 2022 average rates of foreign exchange.

The number of employees expressed in full-time equivalent staff ('FTE') at 31 December 2022 was 219,199, a decrease of 498 compared with 31 December 2021. The number of contractors at 31 December 2022 was 6,047, a decrease of 145.

Adjusted share of profit from associates and JVs

Adjusted share of profit from associates and joint ventures of $2.7bn was 7% lower than in 2021, primarily as 2021 included a higher share of profit from BGF due to the recovery in asset valuations. This was partly offset by an increase in the share of profit from SABB.

Balance sheet and capital

Balance sheet strength

At 31 December 2022, our total assets of $3.0tn were broadly unchanged from 31 December 2021 on a reported basis, which included adverse effects of foreign currency translation differences of $152bn. On a constant currency basis, total assets increased $161bn, primarily from a growth in derivative asset balances.

Reported loans and advances to customers decreased by $121bn. On a constant currency basis, loans and advances fell by $66bn, primarily due to the reclassification of $81bn of balances to held for sale, notably associated with our retail banking operations in France and our banking business in Canada. While our near-term outlook on lending growth remains cautious, we expect mid-single-digit percentage annual loan growth in the medium to long term.

Reported customer accounts of $1.6tn decreased by $140bn, and by $52bn on a constant currency basis, mainly due to the reclassification to held for sale.

Reported loans and advances to customers as a percentage of customer accounts was 58.9%, which was lower compared with 61.1% at 31 December 2021.

Distributable reserves

The distributable reserves of HSBC Holdings at 31 December 2022 were $35.2bn, compared with $32.2bn at 31 December 2021. The increase was primarily driven by profits generated of $12.4bn and a foreign exchange gain on the redemption of additional tier 1 securities of $0.4bn, offset by ordinary dividend payments and additional tier 1 coupon distributions of $6.5bn, other reserves movements of $2.3bn and $1bn related to our share buy-back programme.

Capital position

We actively manage the Group's capital position to support our business strategy and meet our regulatory requirements at all times, including under stress, while optimising our capital efficiency. To do this, we monitor our capital position using a number of measures. These include our capital ratios and the impact on our capital ratios as a result of stress.

Our CET1 ratio at 31 December 2022 was 14.2%, down 1.6 percentage points from 2021. Capital generation was more than offset by new regulatory requirements, a fall in the fair value through other comprehensive income ('FVOCI'), dividends, share buy-backs and foreign exchange movements. RWAs were relatively stable with growth broadly offset by foreign exchange movements.

Liquidity position

We actively manage the Group's liquidity and funding to support our business strategy and meet regulatory requirements at all times, including under stress. To do this, we monitor our position using a number of risk appetite measures, including the liquidity coverage ratio and the net stable funding ratio. During 2022, the average high-quality liquid assets we held was $647bn. This excludes high-quality liquid assets in legal entities which are not transferable due to local restrictions.

For further details, see page 205.

Total assets

($bn)

$2,967bn

2022	**2,967**
2021	2,958
2020	2,984

Common equity tier 1 ratio

(%)

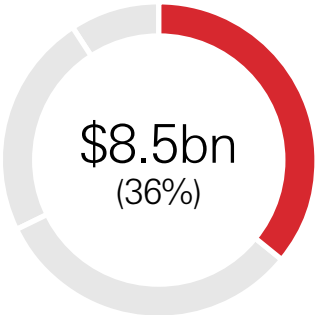
14.2%

2022	**14.2**
2021	15.8
2020	15.9

Wealth and Personal Banking

We serve around 38 million customers globally, including 6 million of whom are international, from retail customers to ultra high net worth individuals and their families.

Contribution to Group adjusted profit before tax



To meet our customers' needs, we offer a full suite of products and services across transactional banking, lending and wealth.

WPB continued to invest in our key strategic priorities of expanding our Wealth franchise in Asia, developing our transactional banking and lending capabilities, and addressing our customers' international needs. Performance benefited from our product diversification in the context of rising interest rates mitigating adverse movements in market impacts in insurance and lower customer activity in equity markets. The results included a more normalised level of adjusted ECL charges in 2022, compared with releases in 2021.

	2022	2021	2020	2022 vs 2021	
Adjusted results	**$m**	$m	$m	**$m**	**%**
Net operating income	**24,367**	20,963	21,481	**3,404**	**16**
Change in expected credit losses and other credit impairment charges	**(1,137)**	213	(2,878)	**(1,350)**	**>(200)**
Operating expenses	**(14,726)**	(14,489)	(14,536)	**(237)**	**(2)**
Share of profit in associates and JVs	**29**	34	6	**(5)**	**(15)**
Profit before tax	**8,533**	6,721	4,073	**1,812**	**27**
RoTE excluding significant items (%)[1]	**18.5**	15.2	9.1		

1 Since 1 January 2021, the UK bank levy has been included in the calculation of this measure. Comparative data have not been re-presented.

Creating a seamless digital journey for our international customers

To deliver on our strategic focus on better serving and growing our 6 million international customers, we have enhanced our proposition for customers with international needs.

In 2022, we launched digital international account opening in Singapore, the UK and Australia, and made enhancements to the existing onboarding journeys in Hong Kong, the US, Canada, mainland China and the Channel Islands, allowing customers to open their accounts even before they arrive in their new country. Global Money Transfers offers customers an easy, quick, and competitively priced way for foreign currency payments, and is now live in eight markets. In addition, a partnership-enabled innovation allows customers in Singapore to access their credit history from other markets, using this information to expedite credit card limit decisions.

Divisional highlights

$80bn

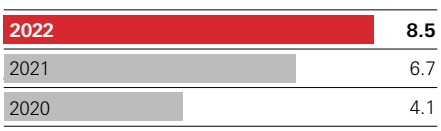
WPB net new invested assets in 2022, up 25% compared with 2021.

6 million

International customers at 31 December 2022, an increase of 7% compared with 2021.

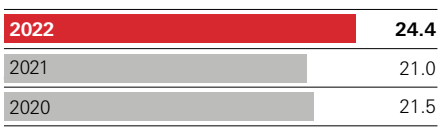
Adjusted profit before tax
($bn)

$8.5bn



Net operating income
($bn)

$24.4bn



International customers are those who bank in more than one market, those whose address is different from the market we bank them in and customers whose nationality, or country of birth for non-resident Indians and overseas Chinese, is different to the market we bank them in. Customers may be counted more than once when banked in multiple countries. Customer numbers exclude those acquired through our purchase of L&T Investment Management.

Management view of adjusted revenue	2022	2021	2020	2022 vs 2021	
	$m	$m	$m	$m	%
Wealth	**8,091**	8,783	7,737	**(692)**	**(8)**
– investment distribution	**3,066**	3,377	3,177	**(311)**	**(9)**
– Global Private Banking	**1,978**	1,746	1,712	**232**	**13**
net interest income	**946**	620	661	**326**	**53**
non-interest income	**1,032**	1,126	1,051	**(94)**	**(8)**
– life insurance manufacturing	**1,914**	2,508	1,838	**(594)**	**(24)**
– asset management	**1,133**	1,152	1,010	**(19)**	**(2)**
Personal Banking	**15,911**	11,587	12,683	**4,324**	**37**
– net interest	**14,610**	10,258	11,472	**4,352**	**42**
– non-interest income	**1,301**	1,329	1,211	**(28)**	**(2)**
Other[1]	**365**	593	1,061	**(228)**	**(38)**
Net operating income[2]	**24,367**	20,963	21,481	**3,404**	**16**

1 'Other' includes the distribution (where applicable) of retail and credit protection insurance, disposal gains and other non-product-specific income. It also includes allocated revenue from Markets Treasury (2022: $494m, 2021: $807m, 2020: $1,048m), HSBC Holdings interest expense and hyperinflation.

2 'Net operating income' means net operating income before change in expected credit losses and other credit impairment charges (also referred to as 'revenue').

Financial performance

Adjusted profit before tax of $8.5bn was $1.8bn or 27% higher than in 2021. Despite an adverse movement of $1.4bn in market impacts in life insurance manufacturing, adjusted revenue increased primarily from rising interest rates. There was also a net adjusted ECL charge in 2022 of $1.1bn, compared with a net release of $0.2bn in 2021.

Adjusted revenue of $24.4bn was $3.4bn or 16% higher. Net interest income grew in Personal Banking by $4.4bn due to rising interest rates and balance sheet growth in the UK, Asia, Mexico and the Middle East. This was partly offset by lower Wealth revenue due to adverse market impacts of $1.4bn in life insurance manufacturing, despite strong insurance sales and an increase in net interest income of $0.3bn in Global Private Banking.

In Personal Banking, revenue of $15.9bn was up $4.3bn or 37%.

- Net interest income was $4.4bn or 42% higher due to the positive impact of rising interest rates. This was supported by strong balance sheet growth in the UK, Asia, Mexico and the Middle East. Compared with 2021, deposit balances in Asia increased by $6bn. Mortgage lending increased in the UK by $9bn and in Hong Kong by $3bn. In addition, unsecured lending increased in Asia by 5% and Mexico by 18%.

In Wealth, revenue of $8.1bn was down $0.7bn or 8%, notably from lower life insurance manufacturing as described above. However, our investments in Asia contributed to the generation of net new invested assets of $80bn during 2022.

- Life insurance manufacturing revenue was $0.6bn or 24% lower due to a net adverse movement in market impacts of $1.4bn. In 2022, an adverse movement of $1.0bn compared with favourable impacts of $0.5bn in 2021, reflecting a weaker performance in equity markets. However, the value of new business written increased by $0.2bn or 23%, reflecting the launch of new products. In addition, there was a $0.3bn gain following a pricing update for our policyholders' funds held on deposit with us in Hong Kong to reflect the cost to provide this service. We also recognised a $0.1bn gain on the completion of our acquisition of AXA Singapore.
- Investment distribution revenue was $0.3bn or 9% lower, as muted customer sentiment led to lower activity in equity markets, which compared with a strong 2021, and as Covid-19-related restrictions in Hong Kong in early 2022 resulted in the temporary closure of parts of our branch network. Since then, restrictions have substantially been eased.
- Global Private Banking revenue was $0.2bn or 13% higher due to the positive impact of rising interest rates on net interest income. This increase was partly offset by a decline in brokerage and trading revenue, reflecting reduced client activity compared with a strong 2021.
- Asset management revenue was $19m or 2% lower, as adverse market conditions led to unfavourable valuation movements. This was in part mitigated by growth in management fees from net new invested assets of $45bn in 2022 and improved performance fees.

Other revenue fell by $0.2bn or 38%, notably from a lower allocation of revenue from Markets Treasury.

Adjusted ECL were a net charge of $1.1bn, reflecting a more normalised level of ECL charges, including provisions relating to a deterioration in the forward economic outlook from heightened levels of uncertainty and inflationary pressures. This compared with a net release of $0.2bn in 2021 from Covid-19-related allowances previously built up in 2020.

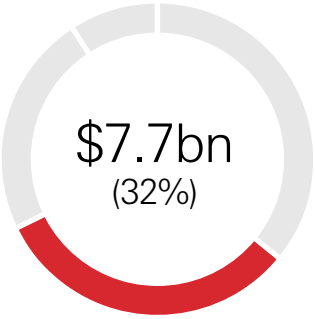
Adjusted operating expenses of $14.7bn were $0.2bn or 2% higher, mainly due to continued investments, notably in wealth in Asia including the costs related to our AXA Singapore acquisition, and from the impact of higher inflation. These increases were partly offset by the benefits of our cost-saving initiatives.

The reported results of our WPB business included an impairment of $2.4bn recognised following the reclassification of our retail banking operations in France as held for sale on 30 September 2022. This impairment is excluded from our adjusted results. At 31 December 2022, loans and advances to customers of $52.4bn and customer accounts of $56.6bn were classified as held for sale, notably relating to our retail banking operations in France and our banking business in Canada.

Commercial Banking

We support businesses in 54 countries and territories, ranging from small enterprises to large companies operating globally.

Contribution to Group adjusted profit before tax



We help businesses grow by supporting their financial needs, facilitating cross-border trade and payments, and providing access to products and services. We help them access international markets, provide expert financial advice and offer access to a full suite of HSBC solutions from across the Group's other businesses.

We continued our investment in technology, launching new products to support customers and make banking with us easier. With our clients and partners we have made progress in delivering our sustainability strategy. We act as a trusted transition partner, seeking to provide sustainable supply chain solutions, and aim to capture growth opportunities as we transition into a new low-carbon economy. Strong performance in Global Payments Solutions ('GPS') continued due to interest rate rises and 19% growth in fee income. This was partly offset by an adjusted ECL charge in 2022 relative to a net release in 2021.

	2022	2021	2020	2022 vs 2021	
Adjusted results	**$m**	$m	$m	**$m**	**%**
Net operating income	**16,215**	12,538	12,889	**3,677**	**29**
Change in expected credit losses and other credit impairment charges	**(1,858)**	225	(4,710)	**(2,083)**	**>(200)**
Operating expenses	**(6,642)**	(6,554)	(6,475)	**(88)**	**(1)**
Share of profit in associates and JVs	**1**	1	(1)	**—**	**—**
Profit before tax	**7,716**	6,210	1,703	**1,506**	**24**
RoTE excluding significant items (%)[1]	**14.2**	10.8	1.3		

1 Since 1 January 2021, the UK bank levy has been included in the calculation of this measure. Comparative data have not been re-presented.

Funding digital growth and innovation

We are helping technology companies to grow in Asia by providing them with specialist financing solutions. These include Grab, a leading south-east Asian platform, which has been on a journey of growth over the last decade.

Based in Singapore, the company started as a ride-hailing app in 2012, and has since expanded to provide transport, food delivery and digital payments services. It has become an everyday, multi-use platform for more than 33 million consumers every month.

Divisional highlights

19%

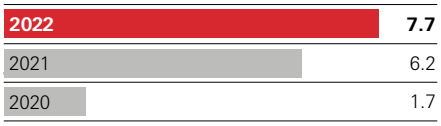
Growth in adjusted net fee income in GPS, supported by repricing and strategic initiatives.

43%

Growth in adjusted net interest income across all CMB products, notably in GPS (up 149%) and GTRF (up 24%).

Adjusted profit before tax
($bn)

$7.7bn



Net operating income
($bn)

$16.2bn

Management view of adjusted revenue	2022 $m	2021 $m	2020 $m	2022 vs 2021 $m	2022 vs 2021 %
Global Trade and Receivables Finance	**2,084**	1,829	1,687	**255**	**14**
Credit and Lending	**5,722**	5,667	5,465	**55**	**1**
Global Payments Solutions	**6,839**	3,354	4,040	**3,485**	**>100**
Markets products, Insurance and Investments and Other[1]	**1,570**	1,688	1,697	**(118)**	**(7)**
– of which: share of revenue for Markets and Securities Services and Banking products	**1,185**	1,005	898	**180**	**18**
Net operating income[2]	**16,215**	12,538	12,889	**3,677**	**29**

1 Includes CMB's share of revenue from the sale of Markets and Securities Services and Banking products to CMB customers. GBM's share of revenue from the sale of these products to CMB customers is included within the corresponding lines of the GBM management view of adjusted revenue. Also includes allocated revenue from Markets Treasury, HSBC Holdings interest expense and hyperinflation.

2 'Net operating income' means net operating income before change in expected credit losses and other credit impairment charges (also referred to as 'revenue').

Financial performance

Adjusted profit before tax of $7.7bn was $1.5bn or 24% higher than in 2021. This was driven by an increase in adjusted revenue across all CMB products and in all regions, notably in Asia and the UK, and included a 149% increase in GPS net interest income. This was partly offset by a net adjusted ECL charge compared with a net release of adjusted ECL in 2021. Adjusted operating expenses remained stable, as increased investment spend was mitigated by continued cost discipline.

Adjusted revenue of $16.2bn was $3.7bn or 29% higher:

- In GPS, revenue increased by $3.5bn, with growth in all regions, particularly in Asia and the UK, driven by higher margins, reflecting interest rate rises and business repricing actions. Revenue also benefited from a 6% increase in average deposit balances. There was a 19% increase in fee income, notably in cards and payments, with growth in all regions, notably in the UK, supported by the delivery of our strategic fee initiatives.
- In Global Trade and Receivables Finance ('GTRF'), revenue increased by $0.3bn or 14%, with growth in all regions, notably in the UK and Asia, driven by an increase in average balances, which rose by 17% compared with 2021 at improved margins. In addition, fee income grew by 4% compared with 2021.
- In Credit and Lending, revenue increased by $0.1bn or 1%, notably in Canada and Latin America, driven by a 3% growth in average balances. In addition, fee income grew by 1%.
- In Markets products, Insurance and Investments and Other, revenue decreased by $0.1bn or 7%, reflecting the adverse effects of hyperinflation accounting in Türkiye and Argentina, as well as lower Markets Treasury and insurance revenue. This was partly offset by an 18% increase in collaboration revenue from GBM products, notably Foreign Exchange.

Adjusted ECL were a net charge of $1.9bn, compared with a net release of $0.2bn in 2021. The charge in 2022 primarily related to stage 3 charges in Asia, mainly in the commercial real estate sector in mainland China, and higher charges in the UK reflecting heightened levels of uncertainty and inflationary pressures. This compared with a net release in 2021 of Covid-19-related allowances previously built up in 2020.

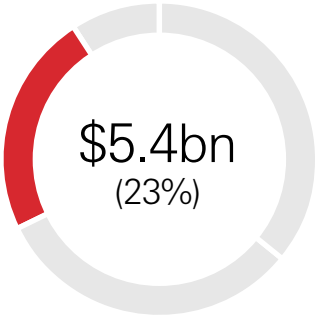
Adjusted operating expenses of $6.6bn remained broadly stable (up 1%). The continued investment in technology and the impact of higher inflation were mitigated by continued cost discipline on discretionary spend and through hiring efficiencies, as well as from the impact of our cost-saving initiatives.

At 31 December 2022, loans and advances to customers of $25.1bn and customer accounts of $22.1bn relating to our banking business in Canada were reclassified as held for sale.

Global Banking and Markets

We support multinational corporates, financial institutions and institutional clients, as well as public sector and government bodies.

Contribution to Group adjusted profit before tax



We are leaders in facilitating global trade and payments, particularly into and within Asia and the Middle East, enabling our clients in the East and West to achieve their objectives by accessing our expertise and geographical reach. Our product specialists deliver a comprehensive range of transaction banking, financing, capital markets and advisory, and risk management services.

GBM adjusted profit before tax increased in 2022, reflecting a strong revenue performance due to higher client activity related to volatility and rising interest rates. This was partly offset by adjusted ECL charges, which included a build-up of reserves, reflecting heightened levels of economic uncertainty, compared with releases in 2021. We continued to invest in technology to modernise our infrastructure, innovate product capabilities and to support our clients.

	2022	2021	2020	2022 vs 2021	
Adjusted results	**$m**	$m	$m	**$m**	**%**
Net operating income	**15,359**	13,982	14,696	**1,377**	**10**
Change in expected credit losses and other credit impairment charges	**(587)**	313	(1,227)	**(900)**	**>(200)**
Operating expenses	**(9,325)**	(9,250)	(8,895)	**(75)**	**(1)**
Share of profit in associates and JVs	**(2)**	—	—	**(2)**	**—**
Profit before tax	**5,445**	5,045	4,574	**400**	**8**
RoTE excluding significant items (%)[1]	**10.7**	8.6	6.7		

1 Since 1 January 2021, the UK bank levy has been included in the calculation of this measure. Comparative data have not been re-presented.

Connecting the world to the biggest IPO in UAE

In April 2022, the initial public offering ('IPO') of Dubai Electricity and Water Authority raised $6.1bn for the Government of Dubai, which sold shares in the largest IPO ever to be carried out in the UAE, and the largest IPO focused on the utility sector in 2022. As joint global coordinator and joint bookrunner, we supported the state-owned utility company through the transaction, which attracted $85.7bn of demand. This demonstrated the depth of interest from international, regional and local investors, and the capacity for growth opportunities in the Middle East. We supported the company to articulate its energy transition plans to investors. The company is a supporter of the Dubai Clean Energy Strategy 2050, which aims to provide 100% of Dubai's energy production capacity from clean energy sources by 2050.

Divisional highlights

50%

Adjusted revenue generated in Asia in 2022.

$94bn

Cumulative gross RWA reductions since the start of our RWA programme in 2020. This included accelerated saves of $9.6bn made in 2019.

Adjusted profit before tax
($bn)

$5.4bn

Net operating income
($bn)

$15.4bn

Management view of adjusted revenue	2022	2021	2020	2022 vs 2021	
	$m	$m	$m	$m	%
Markets and Securities Services	**8,926**	7,810	8,489	**1,116**	**14**
– Securities Services[1]	**2,072**	1,799	1,724	**273**	**15**
– Global Debt Markets	**706**	838	1,399	**(132)**	**(16)**
– Global Foreign Exchange	**4,215**	3,158	3,917	**1,057**	**33**
– Equities	**1,007**	1,156	790	**(149)**	**(13)**
– Securities Financing	**920**	827	929	**93**	**11**
– Credit and funding valuation adjustments	**6**	32	(270)	**(26)**	**(81)**
Banking	**7,282**	6,244	6,392	**1,038**	**17**
– Global Trade and Receivables Finance	**742**	675	668	**67**	**10**
– Global Payments Solutions	**3,131**	1,727	1,932	**1,404**	**81**
– Credit and Lending	**2,363**	2,465	2,550	**(102)**	**(4)**
– Capital Markets and Advisory[1]	**748**	1,188	1,002	**(440)**	**(37)**
– Other[2]	**298**	189	240	**109**	**58**
GBM Other	**(849)**	(72)	(185)	**(777)**	**>(100)**
– Principal Investments	**57**	371	112	**(314)**	**(85)**
– Other[3]	**(906)**	(443)	(297)	**(463)**	**>(100)**
Net operating income[4]	**15,359**	13,982	14,696	**1,377**	**10**

1 From 1 June 2020, Issuer Services was transferred to Global Banking. This resulted in revenue of $80m being recorded in Securities Services in 2020.
2 Includes portfolio management, earnings on capital and other capital allocations on all Banking products.
3 Includes notional tax credits and Markets Treasury, HSBC Holdings interest expense and hyperinflation.
4 'Net operating income' means net operating income before change in expected credit losses and other credit impairment charges (also referred to as 'revenue').

Financial performance

Adjusted profit before tax of $5.4bn was $0.4bn or 8% higher than in 2021. Growth in adjusted revenue of $1.4bn or 10% was partly offset by a net adjusted ECL charge in 2022 of $0.6bn, compared with a net release in 2021 of $0.3bn, and from an increase of $0.1bn in adjusted operating expenses.

Adjusted revenue of $15.4bn was $1.4bn or 10% higher, reflecting a more than 100% growth in GPS net interest income from higher interest rates, and a strong Markets and Securities Services performance driven by increased client activity and disciplined risk management.

In Markets and Securities Services, revenue increased by $1.1bn or 14%.

- In Securities Services, revenue grew by $0.3bn or 15% from higher net interest income as global interest rates rose, partly offset by reduced fee income from lower market levels.
- In Global Debt Markets, revenue fell by $0.1bn or 16%, reflecting lower primary issuances and challenging market conditions.
- In Global Foreign Exchange, revenue growth of $1.1bn or 33% reflected increased client activity due to elevated market volatility and the combined macroeconomic impacts of rising inflation, higher interest rates and a strengthening of the US dollar, as well as a strong trading performance.
- In Equities, revenue fell by $0.1bn or 13% in the context of a strong prior year and lower client activity in 2022.
- In Securities Financing, revenue increased by $0.1bn or 11%, driven by client franchise growth and a strong trading performance.

In Banking, revenue increased by $1.0bn or 17%.

- In GPS, revenue increased by $1.4bn or 81%, driven by margin growth as a result of the rising global interest-rate environment and business pricing actions, together with active portfolio management and average balance growth. Fee income grew in all regions from the continued delivery of our strategic initiatives.
- Capital Markets and Advisory revenue decreased $0.4bn or 37%, primarily from lower fees in line with the reduced global fee pool and adverse valuation movements on leveraged loans, net of hedging.

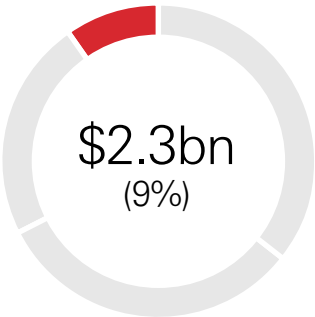
In GBM Other, Principal Investments revenue declined by $0.3bn or 85%, as 2022 included lower valuation gains compared with 2021. There was also a reduction in revenue from Markets Treasury and the impact of hyperinflationary accounting, which are allocated to the global businesses. GBM Other also included a loss of $0.1bn from a buy-back of legacy securities.

Adjusted ECL were a net charge of $0.6bn. This included stage 3 charges predominantly in the commercial real estate sector in mainland China, and in Europe, which also reflected allowances due to a deterioration in the forward economic outlook given the heightened levels of uncertainty and inflationary pressures. This compared with the net release of $0.3bn in 2021 of Covid-19-related allowances previously built up in 2020.

Adjusted operating expenses of $9.3bn increased by $0.1bn or 1% as the impact of higher inflation and strategic investments were in part mitigated by our ongoing cost discipline.

Corporate Centre

Contribution to Group adjusted profit before tax



The results of Corporate Centre primarily comprise the share of profit from our interests in our associates and joint ventures. It also includes Central Treasury, stewardship costs and consolidation adjustments.

Corporate Centre performance in 2022 reflected a lower share of profit from our associates, an increase in hedging costs and revaluation losses on investment properties. These reductions were in part mitigated by a favourable allocation of the UK bank levy and related prior year credits.

Financial performance

Adjusted profit before tax of $2.3bn was $0.3bn or 12% lower than in 2021 due to a reduction in adjusted share of profit in associates and joint ventures, and lower adjusted revenue.

Adjusted revenue was $0.1bn or 29% lower, primarily reflecting revaluation losses on investment properties, compared with gains in 2021, and an increase in costs associated with hedging foreign exchange exposure. The reduction also included the consideration paid in respect of an exchange offer for subordinated notes undertaken by HSBC Holdings plc.

Adjusted operating expenses decreased by $38m or 20%, reflecting a favourable allocation of the UK bank levy and related prior year credits. Since 2021, the UK bank levy and any related credits have been allocated across our global businesses and Corporate Centre, primarily to GBM.

Adjusted share of profit from associates and joint ventures of $2.7bn decreased by $0.2bn or 7%, primarily as 2021 included a higher share of profit from BGF in the UK, due to a recovery in asset valuations. This was partly offset by an increase in the share of profit from SABB.

	2022	2021	2020	2022 vs 2021	
Adjusted results	**$m**	$m	$m	**$m**	**%**
Net operating income	**(596)**	(463)	(218)	**(133)**	**(29)**
Change in expected credit losses and other credit impairment charges	**(10)**	3	–	**(13)**	**>(200)**
Operating expenses	**227**	189	(539)	**38**	**20**
Share of profit in associates and JVs	**2,695**	2,898	2,102	**(203)**	**(7)**
Profit before tax	**2,316**	2,627	1,345	**(311)**	**(12)**
RoTE excluding significant items (%)[1]	**5.4**	5.6	3.1		

1 Since 1 January 2021, the UK bank levy has been included in the calculation of this measure. Comparative data have not been re-presented.

	2022	2021	2020	2022 vs 2021	
Management view of adjusted revenue	**$m**	$m	$m	**$m**	**%**
Central Treasury[1]	**(77)**	(99)	151	**22**	**22**
Legacy portfolios	**(17)**	(31)	(19)	**14**	**45**
Other[2,3]	**(502)**	(333)	(350)	**(169)**	**(51)**
Net operating income[4]	**(596)**	(463)	(218)	**(133)**	**(29)**

1 Central Treasury includes adverse valuation differences on issued long-term debt and associated swaps of $77m (2021: losses of $99m; 2020: gains of $151m).

2 Other comprises consolidation adjustments, funding charges on property and technology assets, revaluation gains and losses on investment properties and property disposals and other revenue items not allocated to global businesses. The reduction in 2022 related primarily to adverse revaluation gains and losses on investment properties.

3 Revenue from Markets Treasury, HSBC Holdings net interest expense and hyperinflation impacts were allocated to the global businesses, to align them better with their revenue and expense. The total Markets Treasury revenue component of this allocation for 2022 was $1,549m (2021: $2,202m; 2020: $2,699m).

4 'Net operating income' means net operating income before change in expected credit losses and other credit impairment charges (also referred to as 'revenue').

Risk overview

Active risk management helps us to achieve our strategy, serve our customers and communities and grow our business safely.

Managing risk

Geopolitical tensions have resulted in an increasingly fragmented macroeconomic, trade and regulatory environment. The global economic slowdown and high inflationary pressures are exacerbating the risks linked to this fragmentation.

Global commodity markets have been significantly impacted by the Russia-Ukraine war, leading to supply chain disruptions and increased prices for both energy and non-energy commodities. This, combined with extensive monetary policy loosening at the height of the Covid-19 pandemic, contributed to a sharp increase in inflation, creating further challenges for central banks and our customers. The continuation of – or any further escalation in – the Russia-Ukraine war could have additional economic, social and political consequences. These include further sanctions and trade restrictions, longer-term changes in the macroeconomic environment, and the risk of higher and sustained inflation, including continued increases in energy and non-energy prices. Interest rates have increased in reaction to inflationary pressures and we have adapted our interest rate risk management strategy in response.

China's policy measures issued at the end of 2022 have increased liquidity and the supply of credit to the mainland China commercial real estate sector. Recovery in the underlying domestic residential demand and improved customer sentiment will be necessary to support the ongoing health of the sector. We will continue to monitor the sector closely, notably the risk of further idiosyncratic real estate defaults and the potential associated impact on wider market, investor and consumer sentiment. Given that parts of the global economy are in, or close to, recession, the demand for Chinese exports may also diminish.

We continued to focus on improving the quality and timeliness of the data used to inform management decisions, through measures such as early warning indicators, prudent active management of our risk appetite, and ensuring regular communication with our Board and key stakeholders.

While the financial performance of our operations varied in different geographies, our balance sheet and liquidity remained strong.

Key risk appetite metrics

Component	Measure	Risk appetite	2022
Capital	CET1 ratio – end point basis	≥13.0%	**14.2%**
Change in expected credit losses and other credit impairment charges[1]	Change in expected credit losses and other credit impairment charges as a % of advances: (WPB)	≤0.50%	**0.24%**
	Change in expected credit losses and other credit impairment charges as a % of advances: wholesale (GBM, CMB)	≤0.45%	**0.40%**

1 Includes change in expected credit losses and other impairment charges and advances related to assets that are held for sale.

Our risk appetite

Our risk appetite defines our desired forward-looking risk profile, and informs the strategic and financial planning process. It provides an objective baseline to guide strategic decision making, helping to ensure that planned business activities provide an appropriate balance of return for the risk assumed, while remaining within acceptable risk levels. Risk appetite supports senior management in allocating capital, funding and liquidity optimally to finance growth, while monitoring exposure to non-financial risks.

Capital and liquidity remain at the core of our risk appetite framework, with forward-looking statements informed by stress testing. We continue to develop our climate risk appetite as we engage with businesses on including climate risk in decision making and starting to embed climate risk appetite into business planning.

At 31 December 2022, our CET1 ratio and ECL charges were within their defined risk appetite thresholds. Wholesale ECL charges increased towards the end of 2022, with additional stage 1 and 2 allowances recorded, as a result of the uncertain macroeconomic environment. Monitoring of measures against our risk appetite remains a key focus. During 2022, we enhanced the monitoring and forecasting of our CET1 ratio through regular reviews in periods of high volatility.

Stress tests

We regularly conduct stress tests to assess the resilience of our balance sheet and our capital adequacy, as well as to provide actionable insights into how key elements of our portfolios may behave during a crisis. We use the outcomes to calibrate our risk appetite and to review the robustness of our strategic and financial plans, helping to improve the quality of management's decision making. The results from the stress tests also drive recovery and resolution planning to help enhance the Group's financial stability under various macroeconomic scenarios. The selection of stress scenarios is based upon the identification and assessment of our top risks, emerging risks and our risk appetite. During 2022, assessments were made of the impact on the Group of the Russia-Ukraine war and the consequences from the deteriorating global economic outlook.

The results of the most recent stress test, referred to as the solvency stress test, published by the Bank of England ('BoE') in December 2021 confirmed the Group was sufficiently capitalised.

The BoE's 2022 annual cyclical scenario stress test, originally due for submission in June 2022, was rescheduled to commence in September 2022 in light of the uncertainty related to the Russia-Ukraine war, and was submitted in January 2023.

As a result of this postponement, our own internal stress test will now be conducted in the first quarter of 2023, and will explore the potential impacts of key vulnerabilities to which we are exposed across certain key regions, including a lower interest-rate environment, additional macroeconomic headwinds including lower oil prices and the introduction of foreign exchange shocks. This focused internal stress test will consider the impacts of the various risk scenarios on those specific regions across all risk types and on capital resources.

Managing risk continued

Climate risk

To support the requirements for assessing the impacts of climate change, we have developed a set of capabilities to execute climate stress testing and scenario analysis. These are used to help improve our understanding of our risk exposures for risk management and business decision making. In 2021, the Prudential Regulation Authority requested all major UK banks to run a climate-related stress test to explore the impacts of a set of scenarios: an early policy action, a late policy action and no additional policy action scenario. This was followed in the first half of 2022 with a second round to explore our strategic responses to such scenarios. We also conducted climate change stress testing exercises for the European Central Bank and the Monetary Authority of Singapore, and in the second half of 2022 we ran an internal climate scenario analysis to identify challenges and opportunities to our net zero strategy, as well as to inform capital planning and risk appetite.

For further details of our approach to climate risk stress testing, see 'Insights from scenario analysis' on page 67.

Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a greener economy. Climate risk can impact us either directly or through our relationships with our clients. This includes potential climate risk arising as a result of our net zero ambition, which could lead to reputational concerns, and potential legal and/or regulatory action if we are perceived to mislead stakeholders on our business activities or if we fail to achieve our stated net zero targets. Our most material exposure to climate risk relates to corporate and retail client financing activity within our banking portfolio. We also have significant responsibilities in relation to asset ownership by our insurance business, employee pension plans, and asset management business.

We seek to manage climate risk across all our businesses in line with our Group-wide risk management framework, and are incorporating climate considerations within our existing risk types to reflect our strategic ambition to align to net zero.

For further details of our approach to climate risk management, see 'Climate risk' on page 221.

For further details of our TCFD disclosures, see the 'ESG review' on page 43.

Our operations

We remain committed to investing in the reliability and resilience of our IT systems and critical services, including those provided by third parties, that support all parts of our business. We do so to help protect our customers, affiliates and counterparties, and to help ensure that we minimise any disruption to services that could result in reputational, legal and regulatory consequences. In our approach to defending against these threats, we invest in business and technical controls to help us detect, manage and recover from issues, including data loss, in a timely manner.

We have made progress with the implementation of our business transformation plans. We seek to manage change execution risk so we can prioritise, manage and deliver change initiatives effectively and safely, and at the scale, complexity and pace required.

For further details on our risk management framework and risks associated with our banking and insurance manufacturing operations, see pages 142 to 144.

Geopolitical and macroeconomic risks

The Russia-Ukraine war has continued to elevate geopolitical instability and has resulted in the use of significant sanctions and trade restrictions against Russia by the UK, the US and the EU, as well as other countries. In response to such sanctions and trade restrictions, Russia has implemented certain countermeasures.

The Russia-Ukraine war, alongside the economic impacts that continue to result from the Covid-19 pandemic, has contributed to increased commodity prices, which, combined with extensive monetary policy loosening during the height of the Covid-19 pandemic, has led to a sharp increase in inflation. In response, central banks both in developed and emerging markets tightened monetary policy sharply in 2022. Inflation is expected to abate in the coming months, albeit only gradually as the ongoing Russia-Ukraine war is likely to keep energy and food prices at high levels.

Fiscal deficits are likely to remain high in both developed and emerging markets as further public spending is rolled out to help the private sector manage rising prices, against a backdrop of slower growth and higher interest rates. This could increase the strains on highly leveraged sovereigns, corporates and households. While the average maturity of sovereign debt in developed markets has lengthened, rising interest rates could reduce the affordability of debt and may eventually bring into question its sustainability in some countries. Among emerging markets, countries that need to refinance maturing US dollar-denominated debt in the context of a strong dollar may face increasing difficulties.

Our businesses also continue to consider the impact of the increasing cost of living on our customers. We are engaging closely with our key regulators to help ensure we continue to meet their expectations of financial institutions' activities at a time of market volatility.

Higher inflation and interest rate expectations around the world – and the resulting economic uncertainty – have had an impact on ECL. The combined pressure of higher inflation and interest rates may impact the ability of our customers to repay debt. We have continued to carry out enhanced monitoring of model outputs and the use of model overlays. This includes management adjustments based on the expert judgement of senior credit risk managers to reflect the uncertainty in current market inflation and interest rate conditions in the forecasts from the underlying macroeconomic scenarios. Inflation and rising interest rates have been considered both directly in certain models, and assessed via adjustments where not directly considered. While many of the government programmes implemented during the Covid-19 pandemic to support businesses and individuals have ceased, this has impacted the level of credit losses, which in turn may have impacted the longer-term reliability of loss and capital models.

The relationship between China and several countries, including the UK and the US, remains complex. The UK, the US, the EU and other countries have imposed various sanctions and trade restrictions on Chinese persons and companies, and may continue to impose further measures. In response to foreign sanctions and trade restrictions, China has imposed sanctions and introduced new laws and trade restrictions that could impact the Group and its customers. Further sanctions and counter-sanctions, whether in connection with Russia or China, may affect the Group and its customers by creating regulatory, reputational and market risks.

Negotiations between the UK and the EU over the operation of the Northern Ireland Protocol are continuing. While there are signs that differences may be diminishing, failure to reach agreement could have implications for the future operation of the EU-UK Trade and Cooperation Agreement.

Geopolitical and macroeconomic risks continued

In August 2022, the US Inflation Reduction Act introduced a minimum tax of 15% with effect from 1 January 2023. It is possible that a minimum tax could result in an additional US tax liability over our regular US federal corporate tax liabilities in a given year, based on differences between the US book and taxable income (including as a result of temporary differences). Given its recent pronouncement, it is unclear at this time what, if any, impact the US Inflation Reduction Act will have on HSBC's US tax rate and US financial results, and HSBC will continue to evaluate its impact as further information becomes available. In addition, potential changes to tax legislation and tax rates in the countries and territories in which we operate could increase our effective tax rate in the future.

We continue to monitor, and seek to manage, the potential implications of all the above developments on our customers and our business.

For further details on our approach to geopolitical and macroeconomic risks, see 'Top and emerging risks' on page 135.

Risks related to Covid-19

While the immediate impact of the Covid-19 pandemic on the global economy has largely abated in most markets, it continues to disrupt economic activity in mainland China and Hong Kong despite the easing in December 2022 of the domestic Covid-19 restrictions that have adversely impacted China's economy, Asia tourism and global supply chains. The return to pre-pandemic levels of social interaction across all our key markets continues to vary as governments respond differently to new waves of infection.

We continue to monitor the situation closely and, given the remaining uncertainties related to the post-pandemic landscape, additional mitigating actions may be required.

For further details on our approach to the risks related to Covid-19, see 'Areas of special interest' on page 142.

Ibor transition

The publication of sterling, Swiss franc, euro and Japanese yen Libor interest rate benchmarks, as well as Euro Overnight Index Average ('Eonia'), ceased from the end of 2021. Our interbank offered rate ('Ibor') transition programme – which is tasked with the development of new near risk-free rate ('RFR') products and the transition of legacy Ibor products – has continued to support the transition of the limited number of remaining contracts in sterling and Japanese yen Libor, which were published using a 'synthetic' interest rate methodology during 2022. We are prepared for the cessation of the publication of these 'synthetic' interest rates from March 2023 and March 2024.

Additionally, prior to the cessation of the publication of US dollar Libor from 30 June 2023, we have implemented the majority of required processes, technology and RFR product capabilities throughout the Group, in preparation for upcoming market events and the continued transition of legacy US dollar Libor and other demising Ibor contracts.

We continue to be exposed to risks associated with Ibor transition, which include regulatory compliance risk, resilience risk, financial reporting risk, legal risk, model risk and market risk. The level of these key risks is diminishing in line with our process implementation and the transition of our legacy contracts. We have sought to implement mitigating controls, where required, and continue to actively manage and monitor these risks.

For further details on our approach to Ibor transition, see 'Top and emerging risks' on page 135.

Top and emerging risks

Our top and emerging risks report identifies forward-looking risks so that they can be considered in determining whether any incremental action is needed to either prevent them from materialising or to limit their effect.

Top risks are those that have the potential to have a material adverse impact on the financial results, reputation or business model of the Group. We actively manage and take actions to mitigate our top risks. Emerging risks are those that, while they could have a material impact on our risk profile were they to occur, are not considered immediate and are not under active management.

Our suite of top and emerging risks is subject to regular review by senior governance forums. We continue to monitor closely the identified risks and ensure management actions are in place, as required.

Risk	Trend	Description
Externally driven		
Geopolitical and macroeconomic risks	▲	Our operations and portfolios are subject to risks associated with political instability, civil unrest and military conflict, which could lead to disruption of our operations, physical risk to our staff and/or physical damage to our assets. Heightened geopolitical tensions, alongside other factors, have also disrupted supply chains globally. Inflation, rising interest rates and slower Chinese economic activity may prompt a global recession that would affect our credit portfolio.
Technology and cybersecurity risk	▶	We face a risk of service disruption resulting from technology failures or malicious activities by internal or external threats. We continue to monitor ongoing geopolitical events and changes to the threat landscape. We operate a continuous improvement programme to protect our technology operations and to counter a fast-evolving cyber threat environment.
Evolving regulatory environment risk	▶	The regulatory and compliance risk environment has become more complex, in part due to heightened geopolitical tensions. There has been increased regulatory focus on operational and cyber resilience, crypto-asset-related risks and sanctions. These, alongside other regulatory priorities, may result in change requirements across the Group in the short to medium term. We continue to monitor regulatory and wider industry developments closely, and engage with regulators as appropriate.
Financial crime risk	▲	We continue to support our customers against a backdrop of increasingly complex geopolitical, socio-economic and technological challenges, including the Russia-Ukraine war. HSBC is monitoring the impacts of the war on the Group, and using its sanctions compliance capabilities to respond to evolving sanctions regulations, noting the challenges that arise in implementing the unprecedented volume and diverse set of sanctions and trade restrictions.
Ibor transition risk	▼	We remain exposed to regulatory compliance, legal and resilience risks as contracts transition away from the remaining demising Ibor benchmarks to new reference rates. We continue to consider the fairness of client outcomes, our compliance with regulatory expectations and the operation of our systems and processes. The key risks are diminishing in line with our process implementation and we are progressing well in transitioning contracts in the remaining demising Ibors, specifically US dollar Libor.
Environmental, social and governance ('ESG') risks	▲	We are subject to ESG risks relating to climate change, nature and human rights. These risks have increased owing to the pace and volume of regulatory developments globally, and due to stakeholders placing more emphasis on financial institutions' actions and investment decisions in respect of ESG matters. Failure to meet these evolving expectations may result in financial and non-financial costs, including adverse reputational consequences.
Digitalisation and technological advances	▲	Developments in technology and changes in regulations have enabled new entrants to the banking industry and new products and services offered by competitors. Along with opportunities, new technology can introduce new risks. This challenges us to continue to innovate to take advantage of new digital capabilities to best serve our customers by adapting our products, and to attract and retain customers and employee talent, while ensuring that the risks are understood and managed with appropriate controls.
Internally driven		
Risks associated with workforce capability, capacity and environmental factors with potential impact on growth	▶	Our businesses, functions and geographies are exposed to risks associated with employee retention and talent availability, and compliance with employment laws and regulations. Heightened demand for talent in key labour markets and continuing Covid-19-related challenges have led to increased attrition and attraction challenges, and continuing pressure on employees. We monitor hiring activities and levels of employee attrition, and each business and function has workforce plans in place to aim to ensure effective workforce forecasting to meet business demands.
Risks arising from the receipt of services from third parties	▶	We procure goods and services from a range of third parties. It is critical that we have appropriate risk management policies and processes to select and govern third parties, including third parties' supply networks, particularly for key activities that could affect our operational resilience. Any deficiency in the management of risks associated with our third parties could affect our ability to support our customers and meet regulatory expectations.
Model risk	▲	Model risk arises whenever business decision making includes reliance on models. We use models in both financial and non-financial contexts, as well as in a range of business applications such as customer selections, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting. Evolving regulatory requirements are driving material changes to the way model risk is managed across the banking industry, with particular focus on capital models. New technologies such as machine learning are driving changes to the model landscape.
Data risk	▶	We use data to serve our customers and run our operations, often in real-time within digital experiences and processes. If our data is not accurate and timely, our ability to serve customers, operate with resilience or meet regulatory requirements could be impacted. We need to ensure that non-public data is kept confidential, and that we comply with the growing number of regulations that govern data privacy and cross-border movement of data.
Change execution risk	▶	Failure to effectively prioritise, manage and/or deliver transformation across the organisation impacts our ability to achieve our strategic objectives. We aim to monitor, manage and oversee change execution risk to ensure our change portfolios and initiatives continue to deliver the right outcomes for our customers, people, investors and communities.

▲ Risk heightened during 2022 ▶ Risk remained at the same level as 2021 ▼ Risk decreased during 2022

Long-term viability and going concern statement

Under the UK Corporate Governance Code, the Directors are required to provide a viability statement that must state whether the Group will be able to continue in operation and meet its liabilities, taking into account its current position and the principal risks it faces. They must also specify the period covered by, and the appropriateness of, this statement.

The Directors have specified a period of three years to 31 December 2025. They are satisfied that a forward-looking assessment of the Group for this period is sufficient to enable a reasonable statement of viability. In addition, this period is covered by the Group's stress testing programmes, and its internal projections for profitability, key capital ratios and leverage ratios. Notwithstanding this, our stress testing programmes also cover scenarios out to five years and our assessment of risks are beyond three years where appropriate (see page 135):

- This period is representative of the time horizon to consider the impact of ongoing regulatory changes in the financial services industry.
- Our updated business plan covers 2023–2027.

The Board, having made appropriate enquiries, is satisfied that the Group as a whole has adequate resources to continue operations for a period of at least 12 months from the date of this report, and it therefore continues to adopt the going concern basis in preparing the financial statements.

Based upon their assessment, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet liabilities as they fall due over the next three years.

In making their going concern and viability assessments, the Directors have considered a wide range of detailed information relating to present and potential conditions, including projections for profitability, cash flows, capital requirements and capital resources.

The Directors carried out a robust assessment of the emerging and principal risks facing the Group to determine its long-term viability, including those that would threaten its solvency and liquidity. They determined that the principal risks are the Group's top and emerging risks as set out on page 40. These include geopolitical and macroeconomic risks, including rising global inflationary pressures, the Russia-Ukraine war and its impact on sanctions and trade restrictions, disrupted supply chains globally and slower Chinese economic activity, all of which have increased to a heightened level during 2022. Digitalisation and technological advances and environmental, social and governance risks remained at a heightened level during 2022.

The Directors assessed that all of the top and emerging risks identified are considered to be material and, therefore, appropriate to be classified as the principal risks to be considered in the assessment of viability. They also appraised the impact that these principal risks could have on the Group's risk profile, taking account of mitigating actions planned or taken for each, and compared this with the Group's risk appetite as approved by the Board.

In carrying out their assessment of the principal risks, the Directors considered a wide range of information including:

- details of the Group's business and operating models, and strategy (see page 12);
- details of the Group's approach to managing risk and allocating capital;
- a summary of the Group's financial position considering performance, its ability to maintain minimum levels of regulatory capital, liquidity funding and the minimum requirements for own funds and eligible liabilities over the period of the assessment. Notable are the risks which the Directors believe could cause the Group's future results or operations to adversely impact any of the above;
- enterprise risk reports, including the Group's risk appetite profile (see page 132) and top and emerging risks (see page 135);
- the impact on the Group due to the Russia-Ukraine war; instability in China's commercial real estate sector; structural changes from the Covid-19 pandemic and strained economic and diplomatic tensions between China and the US, the UK, the EU and other countries;
- reports and updates regarding regulatory and internal stress testing. The Group internal stress test has been delayed from the fourth quarter of 2022 to the first quarter of 2023 and will include overlays applied to the 2022 annual cyclical scenario for HSBC-specific vulnerabilities, including geopolitical issues (and related macroeconomic headwinds) along with the continued impact of Covid-19. It will also consider the impacts of various risk scenarios across all risk types and on capital resources. The 2022 Bank of England annual cyclical scenario, originally due in June 2022, was also postponed in light of the uncertainty related to the Russia-Ukraine war. The exercise commenced on 26 September 2022, with the submission made to the Bank of England in early January 2023 and the results due to be published mid-2023. The initial results of this exercise indicated the Group is sufficiently capitalised to withstand a severe but plausible adverse stress;
- the results of our 2022 internal climate scenario analysis exercise. In 2022, the Group delivered its first internal climate scenario analysis exercise with internal scenarios being formed with reference to external publicly available climate scenarios. Using these external scenarios as a template, the Group adapted them by incorporating unique climate risks and vulnerabilities to which the organisation is exposed. No issues were identified around the going concern status of the Group. Further details of the insights from the 2022 climate scenario analysis are explained from page 67;
- reports and updates from management on risk-related issues selected for in-depth consideration;
- reports and updates on regulatory developments;
- legal proceedings and regulatory matters set out in Note 35 on the financial statements; and
- reports and updates from management on the operational resilience of the Group.

Aileen Taylor
Group Company Secretary and Chief Governance Officer

21 February 2023

Environmental, social and governance review

Our ESG review sets out our approach to our environment, customers, employees and governance. It also explains how we aim to achieve our purpose and deliver our strategy in a way that is sustainable and how we build strong relationships with all of our stakeholders.

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How we present our TCFD disclosures
Our overall approach to TCFD can be found on page 17 and additional information is included on pages 68 and 423. Further details have been embedded in this section and the Risk review section on pages 221 to 230. Our TCFD disclosures are highlighted with the following symbol: TCFD

Our approach to ESG

We are on a journey to incorporate environmental, social and governance principles throughout the organisation, and are taking steps to embed sustainability into our purpose and corporate strategy.

About the ESG review

Our purpose is: 'Opening up a world of opportunity'.

To achieve our purpose and deliver our strategy in a way that is sustainable, we are guided by our values: we value difference; we succeed together; we take responsibility; and we get it done.

We also need to build strong relationships with all of our stakeholders, who are the people who work for us, bank with us, own us, regulate us, and live in the societies we serve and on the planet we all inhabit.

Transition to net zero
We have continued to take steps to implement our climate ambition to become net zero in our operations and our supply chain by 2030, and align our financed emissions to net zero by 2050. We have expanded our coverage of sectors for on-balance sheet financed emissions targets, noting the challenge of evolving methodologies and data limitations. In addition, our operating environment for climate analysis and portfolio alignment is developing. We continue work to improve our data management processes and are setting targets to align our provision of finance with the goals and timelines of the Paris Agreement.

In March 2022, we announced plans to turn our net zero ambition for our portfolio of clients into business transformation across the Group. The plan involves the publication of a Group-wide climate transition plan in 2023. We continued our work to review and update our wider financing and investment policies critical to achieving net zero by 2050, which included publishing an updated energy policy and thermal coal phase-out policy in December 2022.

We are also working with peers and industry bodies to help mobilise the financial services industry to take action on climate change, biodiversity and nature.

Building inclusion and resilience
Our social pillar is centred around building inclusion and resilience for our colleagues and customers, as well as in the communities we serve.

Environmental – Transition to net zero

- Since 2020, we have provided and facilitated $210.7bn of sustainable finance and investment towards our ambition of $750bn to $1tn by 2030. We monitor developments in taxonomies and changing market guidelines in this space.
- In December, we updated our energy policy as an important mechanism to help deliver our financed emissions targets and phase down fossil fuel financing in line with our net zero ambition, and introduced further restrictions for thermal and metallurgical coal.
- We have introduced on-balance sheet financed emissions targets for eight sectors, noting the limitations of evolving methodologies and data quality.

Read more in the Environmental section on page 46.

Social – Building inclusion and resilience

- In 2022, 33.3% senior leadership roles were occupied by women, with a target to achieve 35% by 2025. We have put in place important foundations to support our goal of doubling the number of Black employees in senior leadership roles by 2025.
- Employee engagement, which is our headline measure, increased to 73% in 2022 following a five-point increase from 2019, and was three points above benchmark.

Read more in the Employees section on page 74.

Governance – Acting responsibly

- We conducted a review of our salient human rights issues, including stakeholder consultation with non-governmental organisations ('NGOs') and potentially affected groups.
- Our customer satisfaction performance, using the net promoter score, improved in many markets in which we operate. However, we still have work to do to improve our rank position against competitors, as some have accelerated their performance faster than us.

Read more in the Governance section on page 85.

We are committed to ensuring our people – and particularly our leadership – are representative of the communities that we serve, and that we support their well-being and development so they can learn and grow in their careers. We are equally committed to ensuring there are no unnecessary barriers to finance for our customers. We have an ambition to create a welcoming, inclusive and accessible banking experience.

Inclusion goes hand-in-hand with resilience. We build resilience for our colleagues by supporting their physical, mental and financial well-being, and by ensuring they are equipped with the skills and knowledge to further their careers during a period of significant economic transformation. For our customers, we build resilience primarily through education – by helping them to understand their finances and how to manage them effectively.

Acting responsibly
Our governance pillar focuses on our approach to acting responsibly and recognises topics such as human rights, conduct and data integrity.

Our policies and procedures help us provide the right outcomes for customers, including those with enhanced care needs, which in 2022 took into account the current cost of living crisis. Customer experience is at the heart of how we operate and is measured through customer satisfaction and customer complaints.

We continue our journey to embed ESG principles across the organisation, including incorporating climate change-related risks within the risk management framework, training our workforce, incorporating climate-related targets within executive scorecards, and engaging with customers and suppliers.

How we decide what to measure

We listen to our stakeholders in a number of different ways, which we set out in more detail within the 'ESG overview' on page 14. We use the information they provide us to identify the issues that are most important to them and consequently also matter to our own business.

Our ESG Committee and other relevant governance bodies regularly discuss the new and existing themes and issues that matter to our stakeholders. Our management team then uses this insight, alongside the framework of the ESG Guide (which refers to our obligations under the Environmental, Social and Governance Reporting Guide contained in Appendix 27 to The Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited), and the LR9.8.6R(8) of the Financial Conduct Authority's ('FCA') Listing Rules, and other applicable laws and regulations to choose what we measure and publicly report in this ESG review.

Under the ESG Guide, 'materiality' is considered to be the threshold at which ESG issues become sufficiently important to our investors and other stakeholders that they should be publicly reported. We are also informed by stock exchange listing and disclosure rules globally. We know that what is important to our stakeholders evolves over time and we plan to continue to assess our approach to help ensure we remain relevant in what we measure and publicly report.

Recognising the need for a consistent and global set of ESG metrics, we monitor the developments related to International Sustainability Standard Board ('ISSB') and other standard setters. In the absence of a globally consistent set of sustainability standards, we continued to report against the core World Economic Forum ('WEF') 'Stakeholder Capitalism Metrics' and Sustainability Accounting Standards Board ('SASB') metrics this year.

Consistent with the scope of financial information presented in our *Annual Report and Accounts*, the ESG review covers the operations of HSBC Holdings plc and its subsidiaries. Given the relative immaturity of ESG-related data and methodologies in general, we are on a journey towards improving completeness and robustness.

For further information on our approach to reporting, see the 'Additional information' section of page 422.

Our reporting around ESG

We report on ESG matters throughout our *Annual Report and Accounts*, including the 'ESG overview' section of the Strategic Report (pages 14 to 19), this ESG review (pages 44 to 96), and the 'Climate risk' and 'Insights from climate scenario analysis' sections of the Risk review (pages 221 to 230). In addition, we have other supplementary materials, including our *ESG Data Pack*, which provides a more granular breakdown of ESG information.

Detailed data	Additional reports	Indices
ESG Data Pack 2022	UK Pay Gap Report 2022	SASB Index 2022
	Modern Slavery and Human Trafficking Statement 2022	WEF Index 2022
	Green Bond Report 2022	
	HSBC UN Sustainable Development Goals Bond and Sukuk Report 2022	

For further details of our supplementary materials, see our ESG reporting centre at www.hsbc.com/esg.

Assurance relating to ESG data TCFD

HSBC Holdings plc is responsible for preparation of the ESG information and all the supporting records, including selecting appropriate measurement and reporting criteria, in our *Annual Report and Accounts, ESG Data Pack* and the additional reports published on our website.

We recognise the importance of ESG disclosures and the quality of data underpinning it. We also acknowledge that our internal processes to support ESG are in the process of being developed and currently rely on manual sourcing and categorisation of data. Certain aspects of our ESG disclosures are subject to enhanced verification and assurance procedures including the first and second line of defence. We aim to continue to enhance our approach in line with external expectations.

For 2022, ESG data is subject to stand-alone independent limited assurance reports by PwC in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board, on the following specific ESG-related disclosures and metrics:

- our *Green Bond Report 2022* (published in December 2022);
- our financed emissions for 2019 and 2020 for six sectors (see page 50);
- our progress towards our ambition to provide and facilitate $750bn to $1tn of sustainable finance and investment (see page 57);
- our own operations' scope 1, 2 and 3 (business travel) greenhouse gas emissions data (see page 63); and supply chain emissions data; and
- our 2019 baseline for financed emissions covering 38% of assets under management for our asset management business (see page 56).

The work performed by external parties to support their limited assurance report is substantially less than the work performed for a reasonable assurance opinion, like those provided over financial statements.

Our data dictionaries and methodologies for preparing the above ESG-related metrics and third-party limited assurance reports can be found on: www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Environmental TCFD

Transition to net zero

We are developing new solutions to the climate crisis and supporting the transition of our customers, industries and markets to a net zero future, while moving to net zero ourselves.

At a glance

Transition to net zero
Our net zero ambition represents one of our four strategic pillars. At the core of it is an ambition to support our customers on their transition to net zero, so that the greenhouse gas emissions from our portfolio of clients reaches net zero by 2050. We also aim to be net zero in our operations and supply chain by 2030. We have made good progress on our net zero ambition, including publishing an updated energy policy as an important mechanism to meeting our financed emissions targets, and expanding our financed emissions targets to eight sectors in total. We aim to provide and facilitate $750bn to $1tn of sustainable finance and investment to support our customers in their transition to net zero and a sustainable future by 2030. We continue to engage with our clients on their transition plans and to provide them with financing solutions to support their sustainability goals.

Our approach to climate risk
We recognise that to achieve our climate ambition we need to enhance our approach to managing climate risk. We have established a dedicated programme to develop strong climate risk management capabilities.

We manage climate risks in line with our risk management framework and three lines of defence model. We also use stress testing and scenario analysis to assess how these risks will impact our customers, business and infrastructure. This approach gives the Board and senior management visibility and oversight of the climate risks that could have the greatest impact on HSBC, and helps us identify opportunities to deliver sustainable growth in support of our climate ambition.

For further details on our approach to climate risk management, see 'Environmental, social and governance risk' on page 139, 'Climate risk' on page 221 and 'Insights from scenario analysis' on page 226.

Impact on reporting and financial statements
We have assessed the impact of climate risk on our balance sheet and have concluded that there is no material impact on the financial statements for the year ended 31 December 2022. We considered the impact on a number of areas of our balance sheet including expected credit losses, classification and measurement of financial instruments, goodwill and other intangible assets, our owned properties, as well as our long-term viability and going concern. As part of assessing the impact on our financial statements we conducted scenario analysis to understand the impact of climate risk on our business (see page 67). For further details on our climate risk exposures, see page 145.

For further details of how management has considered the impact of climate-related risks on its financial position and performance see our 'Critical accounting estimates and judgements' in Note 1 'Basis of preparation and significant accounting policies' from page 335.

In this section

Transition to net zero	**Understanding our climate reporting**	To achieve our climate ambition we need to be transparent on the opportunities, challenges, related risks and progress we make.	Page 47
	Our approach to the transition	We aim to achieve net zero in our financed emissions by 2050, and in our own operations and supply chain by 2030.	Page 49
	Financed emissions	We aim to align our financed emissions to achieve net zero by 2050 or sooner.	Page 50
	Supporting customers through transition	Our ability to help finance the transformation of businesses and infrastructure is key to building a sustainable future for our customers and society.	Page 57
	Unlocking climate solutions and innovations	We are working closely with a range of partners to help accelerate investment in natural resources, technology and sustainable infrastructure.	Page 60
	Biodiversity and natural capital strategy	By addressing nature-related risks and investing in nature, we have an opportunity to help accelerate the transition to net zero.	Page 61
	Our approach to our own operations	Part of our ambition to be a net zero bank is to achieve net zero carbon emissions in our operations and supply chain by 2030 or sooner.	Page 62
Our approach to climate risk	**Managing risk for our stakeholders**	We manage climate risk across all our businesses in line with our Group-wide risk management framework.	Page 64
	Our approach to sustainability policies	Our sustainability risk policies seek to ensure that the financial services that we provide to customers do not contribute to unacceptable impacts on people or the environment.	Page 65
	Insights from scenario analysis	Enhancing our climate change stress testing and scenario analysis capability is crucial in identifying and understanding climate-related risks and opportunities.	Page 67
Our approach to climate reporting	**Task Force on Climate-related Financial Disclosures ('TCFD')**	Our TCFD index provides our responses to each of the 11 recommendations and summarises where additional information can be found.	Page 68

Transition to net zero TCFD

Understanding our climate reporting

The transition to net zero is one of the biggest challenges for our generation
We recognise that our planet urgently needs drastic and lasting action to protect our communities, businesses and the natural environment from the damaging effects of climate change.

Our ability to meet our net zero ambition – to align the financed emissions of our portfolio to net zero by 2050, and to become net zero in our operations and supply chain by 2030 – relies on the pace of change taking place in the real economy and action among a broad set of stakeholders, including policymakers. This will include responsible actions from both HSBC and our clients to address climate change.

We acknowledge that to achieve our climate ambition we need to be transparent on the opportunities, challenges, related risks and progress we make. Our reporting will need to evolve to keep pace with market developments and we will aim to overcome challenges with regard to consistency across different markets in which we operate. The role of standard setters and regulators will be important in achieving standardisation. We have highlighted below some of the limitations and challenges that our organisation, and the wider industry, face with regard to climate reporting.

Our transition will be challenging but we have an opportunity to make an impact
Our global footprint means that many of our clients operate in high-emitting sectors and regions that face the greatest challenge in reducing emissions in the critical decades ahead to 2050. Their ability to transition effectively will be key to reaching a global net zero economy in time, but they are often faced with increasingly high energy demand, relatively new carbon-intensive assets, and lower level of investments into clean technologies.

Our approach is rooted in engagement with our clients to provide them with the capital and tools to help them transform their business models and decarbonise. It is also rooted in the reality that a just and inclusive transition requires us to consider region-specific challenges and opportunities. Additionally, countries are moving at different speeds and, given our geographical and sectoral spread, we will naturally have one of the most complex transitions.

Limited international alignment on green taxonomies
Green finance taxonomies are not consistent globally, and evolving taxonomies and practices could result in revisions in our sustainable finance reporting going forward. We recognise that there can be differing views of external stakeholders in relation to these evolving taxonomies, and we will seek to align to enhanced industry standards as they are further developed. We aim to increase transparency across the different types of green and transition finance and investment categories going forward, and plan to engage with standard setters to help evolve sustainable finance product standards to best incentivise science-based decarbonisation, particularly in high transition risk sectors.

Engagement with clients on their transition at an early stage
Success will require governments, clients and finance providers to work together. Stable and strong policy environments are critical to accelerating the energy transition. Active engagement between public and private stakeholders is fundamental to de-risk new technologies and markets and establish new business structures.

We established a new process to assess client transition plans for our largest energy sector clients and those involved in thermal coal to help inform areas for further engagement and guide business decisions. We acknowledge that our assessment of client transition plans is in the initial stages and our engagement with clients on their plans and progress will need to continue to be embedded.

In December 2022, following extensive consultation with scientific and industry bodies, we published our updated energy policy and an update to our thermal coal phase-out policy. These policies acknowledge a need to phase down financing of fossil fuels while also investing at scale in climate solutions to enable a transition to net zero.

Need for enhanced governance, processes, systems, controls and data
Our climate ambition requires enhanced capabilities including governance, processes, systems and controls. We also need new sources of data, some of which may be difficult to assure using traditional verification techniques. We continue to invest in our climate resources and skills, and develop our business management process to integrate climate impacts. Our activities are underpinned by efforts and investment to develop our data and analytics capabilities and to help ensure that we have the appropriate processes, systems, controls and governance in place to support our transition.

We are taking steps to establish an ESG data utility tool to help streamline and support data needs across the organisation. We are enhancing our processes, systems, controls and governance to help achieve the required scale to meet the demands of future ESG reporting. Certain aspects of our reporting rely on manual sourcing and categorisation of data. This categorisation of data is not always aligned with how our businesses are currently managed. We also have a dependency on emissions data from our clients. Given the manual nature, enhanced verification and assurance procedures are performed on a sample basis over this reporting including the first and second line of defence. Our models undergo independent review by an internal model review group, and we obtain limited assurance on our financed emissions and sustainable finance disclosures from external parties including our external auditors.

Understanding our climate reporting continued

Capturing the full-scope of our emissions
Having set on-balance sheet 2030 emissions targets for the oil and gas, and power and utilities sectors, we have now expanded our coverage to include heavy industry and transport sectors, which are key drivers of energy demand. These sectors cover the most emissions-intensive parts of our portfolio. We plan to extend our analysis to four additional sectors – shipping, agriculture, commercial real estate and residential real estate – in our *Annual Report and Accounts 2023* and related disclosures.

Our initial focus has been on on-balance sheet financing, including project finance and direct lending. We also have facilitated emissions from our capital markets activities, through our underwriting in debt and equity capital markets and syndicated lending. We aim to update our targets and baselines to include both on-balance sheet and off-balance sheet activities following the publication of the industry standard for capital markets methodology by the Partnership for Carbon Accounting Financials ('PCAF'). This should give guidance on how to apportion the emissions responsibility between a facilitator and an investor within capital markets activities.

Our Asset Management business released a coal phase-out policy in September 2022, and made its initial emissions disclosure in November 2022 with a portfolio decarbonisation target for 2030 to align investments with the goals of the Paris Agreement. The commitment covers listed equity and corporate fixed income where data and methodologies are most mature. We will also consider the inclusion of emissions on our insurance business.

Disclosure challenges for year-end reporting
Given the challenges on data sourcing, as well as the evolution of our processes and industry standards as mentioned above, there has been an impact on certain climate disclosures:

- Thermal coal exposures: We acknowledge that our processes, systems, controls and governance are not yet designed to fully identify and disclose thermal coal exposures, particularly for exposures within broader conglomerates. We are reassessing the reliability of our data and reviewing our basis of preparation to help ensure that we are reporting all relevant thermal coal exposures aligned to our thermal coal policy. As a result, we have not reported thermal coal exposures in this *Annual Report and Accounts 2022*. We expect that our updated thermal coal exposure dating back to 31 December 2020 will be made available for reporting as soon as practicable in 2023, although this is dependent on availability and quality of data.
- Facilitated emissions: In March 2022, we said we would set capital markets emissions targets for the oil and gas, and power and utilities sectors based on the industry reporting standard from the PCAF once published. We have chosen to defer setting targets for facilitated emissions until the PCAF standard for capital markets is published, which is expected in 2023. We had intended to disclose facilitated emissions for 2019 and 2020 for the oil and gas, and power and utilities sectors for transparency, as we did last year. However, following internal and external assurance reviews performed during the year, we identified certain data and process limitations and have deferred the publication of our facilitated emissions for 2019 and 2020 for these two sectors while additional verification procedures are performed. We aim to provide these disclosures as soon as practicable in 2023. We continue to monitor the developments in industry standards for the publication of such emissions and associated targets, and, as mentioned above, we will seek to align to the PCAF standard when published. However, we will aim to provide transparency on our 2019 and 2020 facilitated emissions for the oil and gas, and power and utilities sectors as they become available, which may be in advance of the PCAF standard being available.
- Shipping financed emissions targets: For the shipping sector, we have chosen to defer setting a baseline and target until there is sufficient reliable data to support our work, allowing us to more accurately track progress towards net zero.

Continuing to evolve our climate disclosures
In 2023, we plan to publish our first Group-wide climate transition plan to provide further details of our strategic approach to net zero and how we plan to transform our organisation to execute our ambition. We also aim to publish an updated deforestation policy and build out our financed emissions portfolio coverage to include agriculture, residential real estate, commercial real estate and shipping, and plan to update our targets for certain sectors to include facilitated emissions once the PCAF standard is launched.

In 2023, we will continue to review our approach to disclosures, with our reporting needing to evolve to keep pace with market developments.

For details of assurance around ESG data, see page 45.
For details of our approach to calculating financed emissions and the relevant data and methodology limitations, see page 52.
For details of our sustainable finance and investment ambition, see page 57.
For details of our approach to thermal coal, see page 66.

Awarded as a green lease leader

We are carrying out a programme to promote green lease clauses across our global portfolio of leased buildings, which commit our landlords to helping us reduce our impact on the environment. As part of this programme, in May 2022, we agreed to move our US headquarters to The Spiral office tower at 66 Hudson Boulevard in Manhattan, New York, which we expect to reduce our total energy consumption by 60% compared with 2021. The Spiral is on track to achieve industry leading LEED Gold and Fitwel certifications for sustainability and building health. Alongside our real estate broker JLL, and our landlord Tishman Speyer, we were recognised by the Green Lease Leaders Organisation with a Green Lease Leaders Team Transaction Award – Platinum Level, for our collaboration to improve the energy efficiency and sustainability of buildings.

Our approach to the transition

We are committed to a net zero future. Our global footprint means we play a significant role in the sectors and regions most critical to the transition to net zero. Many of our clients operate in the high-emitting sectors and regions that face the greatest challenge in reducing emissions. This means we can have a significant impact in helping to drive down emissions in the real economy, but this is a challenging process that will take time.

The Paris Agreement aims to limit the rise in global temperatures to well below 2°C, preferably to 1.5°C, compared with pre-industrial levels. To limit the rise in global temperatures to 1.5°C, the global economy would need to reach net zero greenhouse gas emissions by 2050. We are committed to a science-aligned phase-down of fossil fuel finance in line with the Paris Agreement.

We have committed to publish our own Group-wide climate transition plan in 2023. This plan will bring together our climate strategy, science-based targets, and how we plan to embed this into our processes, policies, governance and capabilities. It will outline, in one place, not only our commitments, targets and approach to net zero across the sectors and markets we serve, but also how we are transforming our organisation to embed net zero and help finance the transition. Our approach to nature and enabling a just and resilient transition will also be incorporated into our climate transition plan.

Our net zero policies

In December 2022, we published our updated policy covering the broader energy system, including upstream oil and gas, oil and gas power generation, coal, hydrogen, renewables and hydropower, nuclear, biomass and energy from waste. The policy seeks to balance three related objectives: driving down global greenhouse gas emissions; enabling an orderly transition that builds resilience in the longer term; and supporting a just and affordable transition. In December, we also expanded our thermal coal phase-out policy, in which we committed to not providing new finance or advisory services for the specific purposes of the conversion of existing coal-to-gas-fired power plants, or new metallurgical coal mines. Our updated energy and thermal coal phase-out policies were drafted in consultation with leading independent scientific and international bodies and investors. Details on the policies can be found in 'Our approach to sustainability policies' on page 65.

Working with our customers and suppliers

We believe we can make the most significant impact by working with our customers to support their transition to a net zero global economy.

We aim to align our financed emissions to net zero by 2050 or sooner. We are setting targets on a sector by sector basis that are consistent with net zero outcomes by 2050. In assessing financed emissions, we focus on those parts of the sector that we consider are most material in terms of greenhouse gas emissions, and where we believe engagement and climate action have the greatest potential to effect change, taking into account industry and scientific guidance.

We have set interim 2030 targets for on-balance sheet financed emissions for eight sectors. These include six sectors for which we have reported 2019 and 2020 emissions: oil and gas; power and utilities; cement; iron, steel and aluminium; aviation; and automotive. We have also set targets for thermal coal power and thermal coal mining.

In 2022, we established a process to assess client transition plans to help inform areas for further engagement and guide business decisions. We expect engagement with our customers on their transition plans to form a core part of our approach as we pursue our targets. We acknowledge that our assessment of client transition plans is in the initial stages and our engagement with clients on their plans and progress will need to continue to be embedded.

We aim to become net zero in our operations and supply chain by 2030. This covers our direct and indirect greenhouse gas emissions, known as scope 1, 2 and 3 emissions. As well as transforming our own operations and supply chain to net zero, we are asking our suppliers to do the same.

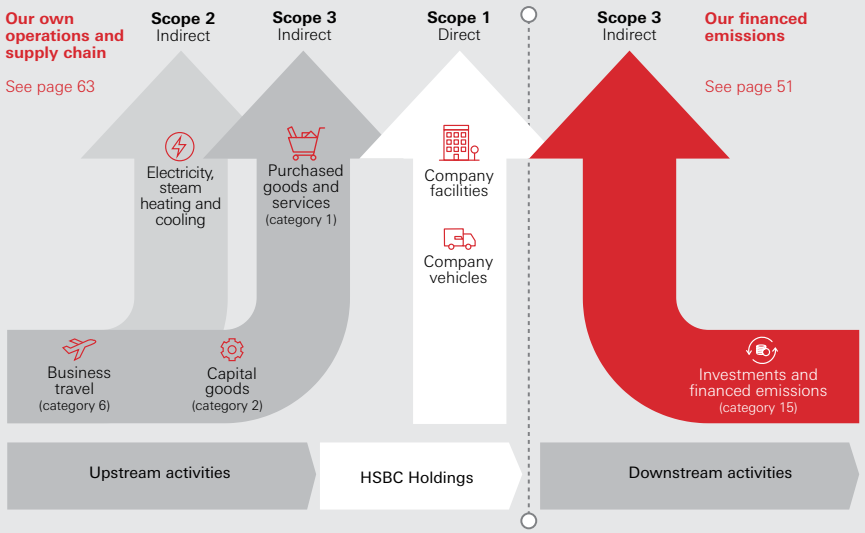
The next section provides further details on how we are measuring our progress on our financed emissions ambition. For further details of the progress made to date on our own operations and supply chain, see page 62. The diagram below shows how these ambitions map to our scope 1, 2 and 3 emissions.

Explaining scope 1, 2 and 3 emissions

To measure and manage our carbon emissions, we follow the Greenhouse Gas Protocol global framework, which identifies three scopes of emissions. Scope 1 represents the direct emissions we create. Scope 2 represents the indirect emissions resulting from the use of electricity and energy to run a business. Scope 3 represents indirect emissions attributed to upstream and downstream activities taking place to provide services to customers. Our upstream activities include business travel and emissions from our supply chain including transport, distribution and waste. Our downstream activities include those related to investments and financed emissions.

Under the protocol, scope 3 emissions are also broken down into 15 categories, of which we provide reporting emissions data for three related to upstream activities, which are: purchased goods and services (category 1); capital goods (category 2); and business travel (category 6). We also provide reporting data for one category related to downstream activities, which is investments and financed emissions (category 15)

For further breakdown of our scope 1, 2 and 3 emissions, see our *ESG Data Pack* at www.hsbc.com/esg.



Financed emissions TCFD

We announced our ambition to become a net zero bank in October 2020, including an aim to align our financed emissions to net zero by 2050 or sooner. We plan to publish initial financed emissions targets for 2030, and in five-year increments thereafter. We remain committed to working with our customers to support their journey towards a net zero future, and deploying capital towards decarbonisation solutions for the most emissions-intensive sectors.

Our analysis of financed emissions considers on-balance sheet financing, including project finance and direct lending. We distinguish between 'on-balance sheet financed' and 'facilitated' emissions where necessary. Financed emissions link the financing we provide to our customers and their activities in the real economy, and provide an indication of the greenhouse gas emissions associated with those activities. They form part of our scope 3 emissions, which include emissions associated with the use of a company's products and services. We also recognise that we have more to do to embed these targets in our business, including enhanced capabilities and new sources of data as set out on page 47.

In 2021, we started measuring our financed emissions for two emissions-intensive sectors: oil and gas, and power and utilities. On the following pages, we present the progress for both sectors against the on-balance sheet financed emissions baseline that we now measure ourselves against. We have also begun measuring the financed emissions and setting targets for four additional sectors: cement; iron, steel and aluminium; aviation; and automotive. During our analysis of the shipping sector, we noted significant data gaps. We have therefore chosen to defer setting a baseline and target for this sector until there is sufficient reliable data to support our work.

We plan to measure and report progress on an annual basis, and plan to extend our analysis to four new sectors – shipping, agriculture, commercial real estate and residential real estate – in our *Annual Report and Accounts 2023* and related disclosures. For the new sectors, we plan to set production intensity targets. We believe these targets are robust as they are linked to real world production, and allow us to deploy capital towards solutions for progressive decarbonisation, supporting our clients' transition plans.

Our approach to financed emissions

In our approach to assessing our financed emissions, our key methodological decisions were shaped in line with industry practices and standards. We recognise these are still developing.

Coverage of our analysis
For each sector, we focused our analysis on the parts of the value chain where we believe the majority of emissions are produced based upon industry benchmarks, and to help reduce double counting of emissions.
For aviation, we have focused on scope 1 emissions from airlines and scope 3 from aircraft lessors as we believe the use of lower emissions aviation fuels and different propulsion systems for new aircraft is where attention needs to be prioritised to meet net zero targets. By estimating emissions and setting targets for customers that directly account for, or indirectly control the majority of emissions in each industry, we can focus our engagement and resources where we believe the potential for change is highest.

With regards to the different types of greenhouse gases measured, we include CO_2 and methane (measured in CO_2e) for the oil and gas sectors, and CO_2 only for the remaining sectors due to data availability and greenhouse gas emissions materiality within each sector.

To calculate annual on-balance sheet financed emissions, we used drawn balances as at 31 December in the year of analysis related to wholesale credit and lending, which included business loans, trade and receivables finance, and project finance as the value of finance provided to customers. We excluded products that were short term by design, which are typically less than 12 months in duration, following guidance from the Partnership for Carbon Accounting Financials ('PCAF'), and to reduce volatility.

The chart below shows the scope of our financed emissions analysis of the six sectors, including upstream, midstream and downstream activities within each sector.

Sector	Scope of emissions	Value chain in scope				Coverage of greenhouse gases
Oil and gas	1, 2 and 3	Upstream (e.g. extraction)	Midstream (e.g. transport)	Downstream (e.g. fuel use)	Integrated/ diversified	CO_2/methane
Power and utilities	1 and 2	Upstream (e.g. generation)	Midstream (e.g. transmission and distribution)	Downstream (e.g. retail)		CO_2
Cement	1 and 2	Upstream (e.g. raw materials, extraction)	Midstream (e.g clinker and cement manufacturing)	Downstream (e.g. construction)		CO_2
Iron, steel and aluminium	1 and 2	Upstream (e.g. raw materials, extraction)	Midstream (e.g. ore to steel)	Downstream (e.g. construction)		CO_2
Aviation	1 for airlines, 3 for aircraft lessors	Upstream (e.g. parts manufacturers)	Midstream (e.g. aircraft manufacturing)	Downstream (e.g. airlines and air lessors)		CO_2
Automotive	1, 2 and 3	Upstream (e.g. suppliers)	Midstream (e.g. motor vehicle manufacture)	Downstream (e.g. retail)		CO_2

Key: Included in analysis

Financed emissions continued

Setting our targets
We set targets for sectors based on decarbonisation pathways that are constructed using the Net Zero Emissions by 2050 scenario produced by the International Energy Agency ('IEA').

Following guidance from the Net-Zero Banking Alliance ('NZBA') and the Science Based Targets Initiative ('SBTi') this scenario has low reliance on negative emissions technologies, or the possibility for the rise in global temperatures to exceed 1.5°C before cooling again. The scenario makes reasonable assumptions about the potential for carbon sequestration through nature-based solutions and land use change.

Our approach for financed emissions accounting does not rely on purchasing offsets to achieve any financed emissions targets we set.

Meeting our targets for 2030 is dependent on immediate and significant deployment of available clean technology solutions, as shown by the IEA's Net Zero by 2050 roadmap for the global energy sector. Innovation in this decade needs to be accompanied by large-scale construction of infrastructure to enable the implementation of cleaner technologies. This will require strong policy support and public and private capital to be deployed at scale.

We also recognise that the supply and demand side of the market need to move concurrently. The reduction of fossil fuels in favour of clean energy supply needs to be matched by an increase in demand from industry, buildings and transport to consume clean energy. Both the supply and demand still require significant policy support to enable this transition economically.

An evolving approach
We believe methodologies for calculating financed emissions and setting targets should be transparent and comparable, and should provide science-based insights that focus engagement efforts, inform capital allocation and develop solutions that are both timely and impactful. We continue to engage with regulators, standard setters and industry bodies to shape our approach to measuring financed emissions and managing portfolio alignment to net zero. We also work with data providers and our clients to help us gather data from the real economy to improve our analysis.

Scenarios used in our analysis are modelled upon allocation assumptions of the available carbon budget and actions that need to be taken to drive the global transition to 1.5°C outcomes. Assumptions include technology development and/or adoption, shifts in the energy mix, the retirement of assets, behavioural changes and implementation of policy levers, among others. We expect that scenario developers will be continually working to improve the usability, accuracy and granularity of pathways.

Connecting the offshore energy industry

The global transition to a net zero economy provides opportunities for companies looking to create new connections to renewable energy sources. UK-based JDR Cable Systems, which is part of TFK Group, links global offshore energy sources to the land using its subsea cable technology. As it looks to expand its production, and with the backing of UK Export Finance, we helped to provide a £100m investment loan to finance the building of a new facility in Cambois, near Blyth, Northumberland. The new facility, which occupies the site of a former coal-fired power station, will help JDR expand its product portfolio. It is expected to complete in 2024.

Leading the electric battery charge in Indonesia

We are supporting Hyundai in its journey to produce only electrical vehicles by 2040. We acted as a mandated lead arranger and lender towards a $711m loan to a joint venture company between Hyundai Motor, Kia, Hyundai Mobis and LG Energy Solution. The financing will help fund the construction of an electric vehicle battery manufacturing plant in Karawang, Indonesia, which would be the first in south-east Asia. The facility will have an annual production capacity of 10 gigawatt hours ('GWh')-worth of lithium-ion battery cells.

As the electric vehicle battery sector continues to grow, the facility will help establish Indonesia as an electric vehicle supply chain hub in Asia and be a crucial contributor to Hyundai's net zero ambitions in the region.

Financed emissions continued

Data and methodology limitations

Our financed emissions estimates and methodological choices are shaped by the availability of data for the sectors we analyse.

- We are members of Partnership for Carbon Accounting Financials ('PCAF'), which seeks to define and develop greenhouse gas accounting standards for financial institutions. PCAF developed the Global GHG Accounting and Reporting Standard for the Financial Industry, which focuses on measuring and reporting financed emissions. The PCAF Standard provides guidance on assigning data quality scoring per asset class, creating data transparency and encouraging improvements to data quality in the medium and long term.
- We found that data quality scores varied across the different sectors and years of our analysis, although not significantly. While we expect our data quality scores to improve over time, as companies continue to expand their disclosures to meet growing regulatory and stakeholder expectations, there may be fluctuations within sectors year on year, and/or differences between the data quality scores between sectors due to changes in data availability.
- The majority of our clients do not yet report the full scope of greenhouse gas emissions included in our analysis, in particular scope 3 emissions. In the absence of client-reported emissions, we estimate them using proxies based on company production and revenue figures, and validated key data inputs with our global relationship managers. Although we sought to minimise the use of non-company-specific data, we applied industry averages in our analysis where company-specific data was unavailable. As data improves, estimates will be replaced with reported figures. Our 2019 emissions for our oil and gas, and power and utilities sectors have been revised as a result of changes to data sources.
- Third-party data sets that feed into our analysis may have up to a two-year lag in reported emissions figures, and we are working with data providers to help reduce this.
- The methodology and data used to assess financed emissions and set targets are new and evolving, and we expect industry guidance, market practice, and regulations to continue to change. We plan to refine our analysis using appropriate data sources and current methodologies available for the sectors we analyse.
- In line with the PCAF Standard, to calculate sector-level baselines and annual updates, our portfolio-level financed emissions are weighted by the ratio of our financing in relation to the value of the financed company. We believe this introduces volatility and are assessing if portfolio weight is more appropriate. We remain conscious that the economic value used in the financed emissions calculation is sensitive to changes in drawn amounts or market fluctuations, and we plan to be transparent around drivers for change to portfolio financed emissions where possible.
- The classification of our clients into sectors is performed with inputs from subject matter experts and will also continue to evolve with improvements to data and our sector classification approach.
- The operating environment for climate analysis and portfolio alignment is also maturing. We continue to work to improve our data management processes, and are implementing steering mechanisms to align our provision of finance with the goals and timelines of the Paris Agreement.

Our methodology for financed emissions is set out in our *Financed Emissions Methodology*, which is available at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Targets and progress

We have set out in the table below our defined targets for the on-balance sheet financed emissions for the following sectors: oil and gas; power and utilities; cement; iron, steel and aluminium; aviation; and automotive. On the following pages, we provide more granular details on our financed emissions within these sectors.

Sector	2019 baseline	2020 progress	2030 target	Unit[1]	Target type	Target scenario
Oil and gas	33.0	30.1	(34)%	Mt CO_2e	Absolute	IEA NZE 2050
Power and utilities[2]	589.9	509.6	138	tCO_2/GWh	Intensity	IEA NZE 2050
Cement	0.64	0.64	0.46	tCO_2/t cement	Intensity	IEA NZE 2050
Iron, steel and aluminium[3]	1.8	2.0	1.05 (1.43)	tCO_2/t metal	Intensity	IEA NZE 2050
Aviation	84.0	103.9	63	tCO_2/million rpk	Intensity	IEA NZE 2050
Automotive	191.5	176.2	66	tCO_2/million vkm	Intensity	IEA NZE 2050

1 Our absolute and intensity emission metrics and targets are measured based on the drawn exposures of the counterparties in scope for each sector, which is a subset of our total loans and advances. For the oil and gas sector, absolute emissions are measured in million tonnes of carbon dioxide ('Mt CO_2e') and intensity is measured in million tonnes of carbon dioxide per exajoule ('Mt CO_2e/Ej'); for the power and utilities sector, it is measured in tonnes of carbon dioxide equivalent per gigawatt hour ('tCO_2/GWh'); for the cement sector, it is measured in tonnes of carbon dioxide per tonne of cement ('tCO_2/t cement'); for the iron, steel and aluminium sector, it is measured in tonnes of carbon dioxide per tonne of metal ('tCO_2/t metal'); for the aviation sector, it is measured in tonnes of carbon dioxide per million revenue passenger kilometres ('tCO_2/million rpk'); and for the automotive sector, it is measured in tonnes of carbon dioxide per million vehicle kilometres ('tCO_2/million vkm').

2 Our power and utilities target units have been revised from our 2021 analysis, and the target has been revised from 0.14 Mt CO_2e/TWh to 138 tCO_2/GWh due to rounding. The target value remains unchanged.

3 While the iron, steel and aluminium 2030 target is aligned with the IEA Net Zero Emissions by 2050 scenario, we also reference the Mission Possible Partnership Technology Moratorium scenario, whose 2030 reference range is shown in parentheses.

Financed emissions continued

When assessing the changes from 2019 to 2020, it is important to emphasise the long-term commitment that is needed to meet our 2030 interim targets and how changes to exposure and market fluctuations impact yearly updates. Movement from one year to the next may not reflect future trends for the financed emissions of our portfolio, and as we are at the beginning of our journey to track and measure progress, we believe it would be premature to infer future trends from the 2019 to 2020 progress at this stage. In addition, the Covid-19 pandemic led to anomalies in our portfolio's financed emissions for 2020.

For some sectors, our financed emissions baseline will be different from the Net Zero Emissions by 2050 reference scenario baseline. Where we have applied an absolute reduction target such as for the oil and gas sector, and the target is defined as a percentage reduction from the baseline they will be the same. Similarly, when the sector portfolio intensity is very similar to that of the global average, the baselines may be the same.

We plan to report financed emissions and progress against our targets annually and to be transparent in our disclosures about the methodologies applied. However, financed emissions figures may not be reconcilable or comparable year on year, and targets may require recalibration as data, methodologies and reference scenarios develop.

Oil and gas

For the oil and gas sector, we cover all scopes for upstream as well as integrated companies to help ensure we include the vast majority of CO_2 and methane emissions created by crude oil and natural gas extraction and consumption. In line with the IEA Net Zero Emissions by 2050 scenario, we target an absolute reduction of 34% in on-balance sheet financed emissions by 2030, using 2019 as our baseline. We believe decarbonising the energy system, and therefore our ability to meet our targets, requires electrification of the economy, combined with a shift from consuming fossil fuels towards the use of more renewable electricity and alternative fuels.

Due to data quality and modelling improvements, we have revised our 2019 baseline to 33.0 million tonnes of carbon dioxide ('Mt CO_2e'). The sector's PCAF data quality score is 2.7 for scope 1 and 2, and 2.9 for scope 3 in 2019, indicating that we need to find better data sources, such as reported and verified emissions. Many clients report scope 1 and 2, but for scope 3 we have had to estimate many data points using production and revenue proxies, in line with PCAF guidance. In 2020, absolute financed emissions decreased 9%, mostly as a result of changes in our portfolio during the first year of the Covid-19 pandemic.

Power and utilities

For the power and utilities sector, we include scope 1 and 2, and focus on power generation only. We also follow the IEA Net Zero Emissions by 2050 scenario and target an on-balance sheet financed emissions intensity of 138 tonnes of carbon dioxide equivalent per gigawatt hour ('tCO_2/GWh') by 2030, using 2019 as our baseline. The power and utilities sector is expected to expand significantly as the electrification of transport, heating and other activities will drive an increase in electricity demand. To enable this growth through low-emission sources of electricity, we have chosen an intensity target. We believe financing for renewable electricity will need to increase significantly to help us meet our targets, alongside smart grids and energy storage.

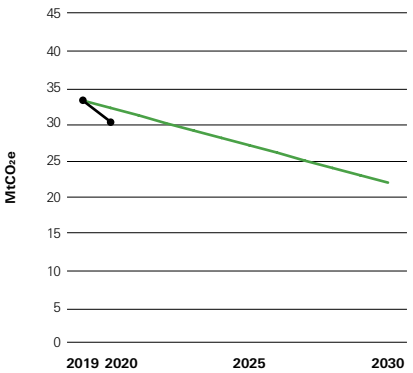
Due to data quality and modelling improvements, we have revised our 2019 baseline to 589.9 tCO_2/GWh, which is higher than the IEA global average. The PCAF score is 3.3, for scope 1 and 2 in 2019, as many of our smaller clients are not disclosing their scope 1 to 2 emissions. These have mostly been estimated using production or revenue, which will be replaced when we have reported and verified emissions from clients. In 2020, the emissions intensity of our portfolio decreased by 14% as a result of clients moving their generation mix to lower emission sources and portfolio shifts.

Cement

We cover scope 1 and 2 for all companies with clinker and cement manufacturing facilities. In line with the IEA Net Zero Emissions by 2050 scenario, we target an on-balance sheet financed emissions intensity of 0.46 tonnes of carbon dioxide per tonne of cement ('tCO_2/t cement') by 2030, using 2019 as our baseline. Some emission reductions can be achieved through energy efficiency. However, we believe that to significantly reduce fuel and process emissions from cement manufacturing, and our ability to meet our targets, large-scale investments are required in new technologies, such as clinker substitution, alternative fuel use such as bioenergy, and carbon capture use and storage. Our 2020 emission intensity stayed level with 2019, as there were no significant changes to the emission intensity of our clients. The PCAF score for the cement sector is 2.2 for scope 1 and 2 in 2019, which is higher compared with other sectors, as we have reported emissions data for a large portion of our clients, and have only needed to estimate emissions through production or revenue proxies for the smaller clients in our portfolio.

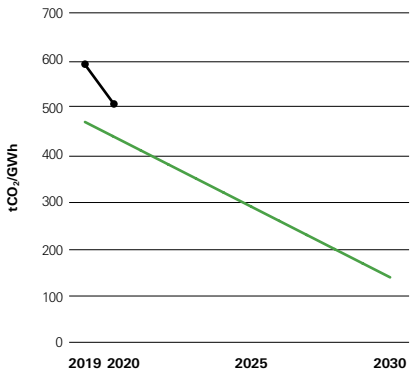
Oil and gas
Mt CO_2e

2020 progress from baseline
(9)%



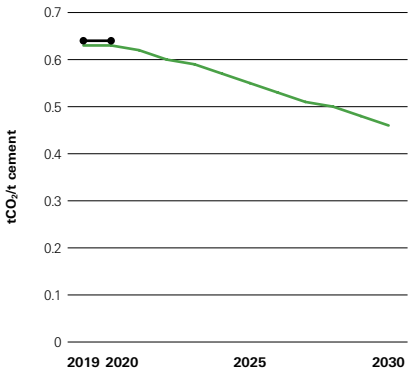
Power and utilities[2]
tCO_2/GWh

2020 progress from baseline
(14)%



Cement
tCO_2/t cement

2020 progress from baseline
0



Key:

Net Zero Emissions by 2050 Scenario — On-balance sheet financed emissions intensity

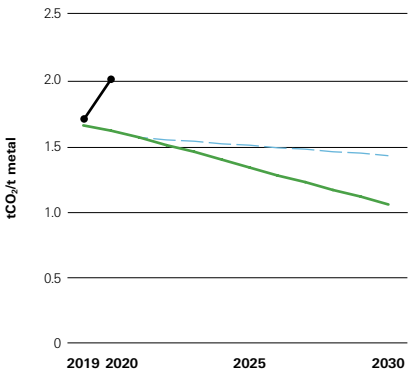
Financed emissions continued

Iron, steel and aluminium
We cover scope 1 and 2 for midstream iron, steel and aluminium production. Due to the low materiality of the aluminium sector's financed emissions within our portfolio, we have combined them with our iron and steel financed emissions. For the iron, steel and aluminium sector, we target an on-balance sheet financed emissions intensity of 1.05 (1.43) tonnes of carbon dioxide per tonne of metal ('tCO_2/t metal') by 2030, using 2019 as our baseline. We use the IEA Net Zero Emissions by 2050 scenario as our core target scenario, and have included the net zero-aligned Mission Possible Partnership Technology Moratorium as an alternative scenario. We recognise that our ability to meet our targets in so-called 'hard-to-abate' sectors is dependent on strong policy support to unlock widespread investment and the scaling up of crucial nascent technologies. We will continue to monitor the progress in the uptake of low-carbon technologies, and assess real economy progress against the IEA and Mission Possible Partnership scenarios. The emissions intensity in 2020 rose due to increased financing to the aluminium sector, which has a higher carbon intensity than that of steel. The PCAF score is 2.5 in 2019, as only a small number of clients have reported emissions, and for many we have had to make estimates based on their revenue.

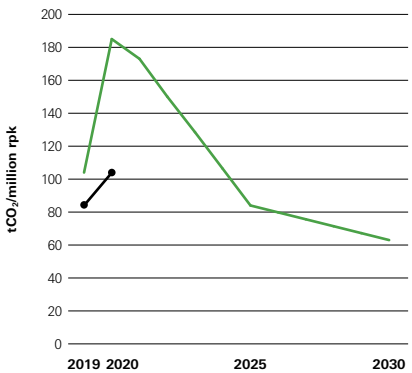
Aviation
In the aviation sector, we included airlines' scope 1 emissions and aircraft lessors' scope 3 emissions, as we believe this captures direct emissions from aircraft as the main source of emissions. We exclude military and dedicated cargo flights. As per the IEA Net Zero Emissions by 2050 scenario, we target an on-balance sheet financed emissions intensity of 63 tonnes of carbon dioxide per revenue passenger kilometre ('tCO_2/rpk') by 2030, using 2019 as our baseline. To reach these intensity levels, and help meet our targets, we believe the sector needs significant policy support investments into alternative fuels, such as sustainable aviation fuel, and new aircraft to reduce emissions. Sustainable aviation fuel is currently too costly and in limited supply, so the industry's decarbonisation efforts are highly dependent on partnerships between energy companies, airlines and aircraft manufacturers. Due to the travel disruption caused by the Covid-19 pandemic in 2020, emissions intensity figures increased significantly as aeroplanes carried fewer passengers on average. This can be seen in the IEA numbers as well as our client portfolio. For the aviation sector, the PCAF score is 2.8 for scope 1 and 2, and 2.8 for scope 3 in 2019, as emissions or production data is available for most clients, although we continue to have a challenge with finding reported emissions from smaller firms.

Automotive
For the automotive sector, we look at scope 1, 2 and 3 emissions from the manufacturing of vehicles, and tank-to-wheel exhaust pipe emissions for light-duty vehicles. We excluded heavy-duty vehicles from our analysis, following industry practice. We will consider including them at a later stage of our analysis as data and methodologies develop. We target an on-balance sheet financed emissions intensity of 66 tonnes of carbon dioxide per vehicle kilometre ('tCO_2/vkm') by 2030, using 2019 as our baseline. This is in line with the IEA Net Zero Emissions by 2050 scenario, modified to match the share of new in-year vehicle sales for light-duty vehicles. We believe decarbonisation of the automotive sector, and therefore our ability to meet our targets, needs large-scale investments in new electric vehicle and battery manufacturing plants, widespread charging infrastructure, and government policies to support electric vehicles. Our 2020 intensity reduced by 8% as a result of clients manufacturing more efficient vehicles, and the increased sales of electric vehicles. The PCAF score for the automotive sector is only 3.3 for scope 1 and 2, and 3.4 for scope 3 in 2019, as most companies only report their scope 1 and 2 emissions. We had to estimate scope 3 emissions using vehicle production numbers. Increased self-reporting of scope 3 emissions from clients would significantly improve data quality.

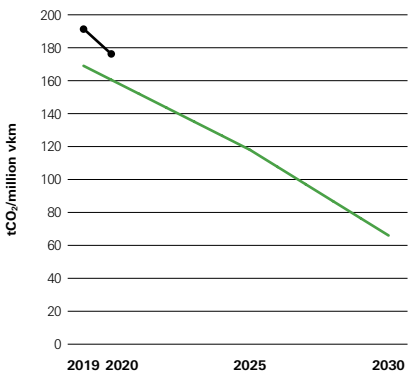
Iron, steel and aluminium[3] tCO_2/t metal — 2020 progress from baseline **11%**



Aviation tCO_2/million rpk — 2020 progress from baseline **24%**



Automotive tCO_2/million vkm — 2020 progress from baseline **(8)%**



Key:
Net Zero Emissions by 2050 Scenario — On-balance sheet financed emissions intensity — MPP Tech Moratorium

Our analysis of shipping emissions

As part of our work in 2022, we analysed financed emissions for the shipping sector to establish a baseline. During our analysis we noted significant data gaps in reported emissions and data from external vendors at the company level. For scope 1 emissions, which are typically the easiest to source, we would have needed to have made estimates using outstanding amounts rather than production or revenue indicators, which would have resulted in the least accurate data quality scoring. We have therefore chosen to defer setting a baseline and target for this sector until there is sufficient reliable data to support our work, allowing us to more accurately set a baseline and track progress towards net zero. We will continue to engage with strategic clients within the sector to encourage disclosure and discuss their transition plans. We believe the shipping industry will require significant policy support and innovation to allow for the use of lower emissions fuels in existing as well as new ships. On the supply side, the provision of low-carbon fuels will need to increase sufficiently to meet this new demand.

Financed emissions continued

Financed emissions
The table below summarises the results of our assessment of financed emissions using 2019 and 2020 data.

		On-balance sheet financed emissions – wholesale credit lending and project finance[1,2]				
					PCAF data quality score[3,†]	
Sector	**Year**	Scope 1–2 ($Mt\ CO_2$)[†]	Scope 3 ($Mt\ CO_2$)[†]	Emissions intensity	Scope 1 and 2	Scope 3
Oil and gas[4, 5]	2019	3.7	29.3	72.2	2.7	2.9
	2020	3.3	26.8	71	2.7	2.9
Power and utilities[4,5]	2019	12.1	N/A	589.9	3.3	N/A
	2020	11.8	N/A	509.6	3.2	N/A
Cement	2019	2.2	N/A	0.64	2.2	N/A
	2020	1.3	N/A	0.64	2.3	N/A
Iron, steel and aluminium	2019	3.2	N/A	1.8	2.5	N/A
	2020	2.7	N/A	2	2.8	N/A
Aviation	2019	6.2	0.11	84	2.8	2.8
	2020	4.9	0.08	103.9	2.6	3
Automotive	2019	0.11	4.0	191.5	3.3	3.4
	2020	0.14	4.9	176.2	3.2	3.3

1 Total amount of short-term finance excluded for all sectors listed is $9.3bn in 2019 and $7.6bn in 2020

2 Total loans and advances analysed in 2019 were $38.3bn representing 1.7% of wholesale credit and lending and project finance at 31 December 2019, and in 2020 were $34.7bn representing 1.7% of wholesale credit and lending and project finance at 31 December 2020.

3 PCAF scores where 1 is high and 5 is low. This is a weighted average score based financing for on-balance sheet financed emissions.

4 In the *Annual Report and Accounts 2021* the units for power and utilities were reported last year as $MtCO_2e$, and are now read $Mt\ CO_2$. Oil and gas absolute emissions are measured in $MtCO_2e$. This year we amended the units for the power and utilities sector from $Mt\ CO_2e/TWh'$ to tCO_2/GWh to align to market practice. While the target value remains unchanged this has led to a revision in the figure reported from 0.14 $Mt\ CO_2e/TWh'$ to 138 tCO_2/GWh.

5 Our 2019 emissions for our oil and gas, and power and utilities sectors have been revised due to changes in data impacting drawn amounts of client lending, and amendments to the assumptions governing the in-scope client population.

† Data is subject to independent limited assurance by PwC in accordance with ISAE 3000/ ISAE 3410. For further details, see our Financed Emissions Methodology and PwC's limited assurance report, which are available at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Our analysis of facilitated emissions

In March 2022, we said we would set capital markets emissions targets for the oil and gas, and power and utilities sectors based on the industry reporting standard from the PCAF once published. We have chosen to defer setting targets for facilitated emissions until the PCAF standard for capital markets is published, which is expected in 2023. We had intended to disclose facilitated emissions for 2019 and 2020 for the oil and gas, and power and utilities sectors for transparency, as we did last year. However, following internal and external assurance reviews performed during the year, we identified certain data and process limitations and have deferred the publication of our facilitated emissions for 2019 and 2020 for these two sectors while additional verification procedures are performed. We aim to provide these disclosures as soon as practicable in 2023.

We continue to monitor the developments in industry standards for the publication of such emissions and associated targets, and, as mentioned above, we will seek to align to the PCAF standard when published. However, we will aim to provide transparency on our 2019 and 2020 facilitated emissions for the oil and gas, and power and utilities sectors as they become available, which may be in advance of the PCAF standard being available.

Financed emissions continued

Embedding financed emissions into our business

Our net zero ambition is underpinned by our relationships with customers and collective engagement, so that we are able to support our customers to take action to address climate change in their own activities.

To achieve this, we aim to embed how we manage and assess financed emissions within our financing portfolios to provide a basis for informing client engagement and business management decisions from a climate perspective.

In 2022, we developed an operating model across our Global Sustainability teams to strengthen our processes, systems, controls and governance. The Global Sustainability function also established a Sustainability Centre of Excellence, a team of sustainability specialists with deep subject matter expertise on new climate technologies, climate analytics and transition planning and assessment, to help us fulfil our net zero commitments and serve our customers.

The Global Sustainability Centre of Excellence, together with the Group Risk and Compliance, and Global Finance functions, have continued to develop our approach, including working to embed financed emissions into our business activities and culture. We have strengthened our climate data and analytics capability to help inform decision making and portfolio management, as well as expanded the resources to support business engagement.

We are placing climate and sustainability at the heart of our engagement with customers, and in particular those customers with the greatest potential to effect change. In 2022, we requested and assessed transition plans for EU and OECD managed clients in scope of our thermal coal phase-out policy. We have also requested and are assessing transition plans for our major oil and gas clients (see page 49).

We aim to provide and facilitate $750bn to $1tn of sustainable finance and investment by 2030 to support our customers in their transition to net zero and a sustainable future. In 2022, we also started to develop an approach for allocating financing to scale technologies critical to reach net zero.

Our own climate transition plan will bring together our financed emissions targets and climate strategy, with how we plan to embed this into our processes, infrastructure, governance and engagement.

The next section provides further detail on how we are embedding net zero considerations into our customer engagement and unlocking finance to support our customers on their transition to net zero and a sustainable future.

Backing green SMEs in the UK

Panthera Group, a family-run construction company, launched EnviroHoard, the UK's first construction hoarding system to be verified as net zero carbon. In March, we supported the firm with the first ever loan through our $500m Green SME Fund, which we announced at COP26 as part of our commitment to supporting small and medium-sized businesses in their transition to net zero. Panthera will use the loan to grow its business in the UK. In 2022, Panthera reduced 446 tonnes of carbon emissions through its installations, and set up a partnership with Circular Ecology and Trees for Cities to help offset the carbon impact of its installations.

Reducing emissions in our assets under management

In July 2021, our asset management business, HSBC Asset Management, signed up to the Net Zero Asset Managers initiative, which encourages investment firms to commit to manage assets in line with the attainment of net zero emissions by 2050.

In November 2022, HSBC Asset Management announced its ambition of reducing scope 1 and 2 carbon emissions by 58% by 2030 for 38% of its total assets under management, consisting of listed equity and corporate fixed income, which amounted to $193.9bn at 31 December 2019.

A baseline year of 2019 was chosen for our calculations as it offered a more realistic picture of the level of carbon emissions intensity than the period after the pandemic. Our baseline for the emission intensity of our portfolio in 2019 was 131tCo_2e/M$ invested, which includes scope 1 and 2 emissions of companies in our portfolio.

Our baseline represents the emissions associated with our investing activities in terms of emissions per dollar invested relevant of the assets under management in scope for this assessment. We will review our interim target at least every five years, with a view to increasing the proportion of assets under management covered until 100% of assets are included. Implementation of our net zero targets remains subject to consultation with our key stakeholders. We plan to stay actively engaged to help support our investors on their own decarbonisation goals, and continue to apply resources in the development of climate solutions.

To support the development of HSBC Asset Management's climate strategy and goal to deliver on its target, it has chosen to align to the Institutional Investors Group on Climate Change's net zero investment framework, which was created for investors to provide a common approach around the actions, metrics and methodologies required to align portfolios to net zero.

The PCAF data quality score for our baseline emissions was 2.63. Data is subject to limited assurance by PwC in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information', and with respect of the greenhouse emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board. For the methodology, PwC's limited assurance report, and details on HSBC Asset Management's net zero ambition, see www.assetmanagement.hsbc.com/net-zero.

Supporting customers through transition TCFD

We understand that financial institutions have a critical role to play in achieving the transition to a net zero global economy. We believe the most significant contribution we can make is by mobilising finance to support our portfolio of customers in their transition to decarbonise.

Mobilising sustainable finance for our customers
Given our global presence and relationships with our customers across industries, we recognise the role we can play in catalysing the global transition to net zero. We are well positioned to help finance the transition in developing and emerging economies, mobilising capital to help enable sustainable business models and an inclusive, just and resilient transition.

In 2022, we continued to expand the horizons of sustainable finance through our products, services and partnerships to help enable emissions reduction in the real economy:

- We launched a $5bn sustainable finance scheme to support businesses of all sizes to transition to low-carbon operations in China's Greater Bay Area, with successful loan applicants entitled to a range of additional services including training, subsidised third-party assessments and assistance from a newly formed team with sustainable financing expertise.
- We created a sustainable supply chain finance programme for apparel company PVH Corp in the US to finance environmentally and socially friendly production at its manufacturing facilities (see page 97).
- We supported Panthera Group, a family-run construction company, to finance and grow the UK's first construction hoarding system to be verified as zero carbon, (see page 56).
- We expanded our green mortgage offering to our retail customers in Hong Kong, mainland China, India and Türkiye, as well as electric vehicle and energy efficiency loans to customers in Hong Kong, Egypt and Argentina.
- We committed to working collaboratively with the government of Egypt in its Nexus of Food, Water and Energy programme to identify ways to use scarce public finances effectively and efficiently, and help raise private finance to support priority projects from its national climate change strategy.

As part of the Just Energy Transition Partnership, which aims to mobilise capital towards emerging and developing economies to support their national climate strategies, we agreed to support the facilitation of at least $10bn of private sector financing for projects in Indonesia and $7.8bn for projects in Vietnam over the next three to five years.

In addition, we were also mandated to act on 12 ESG-related government bonds, including inaugural issuances for the governments of Singapore, Canada and Uruguay. In 2022, we secured six awards at the *Environmental Finance* Bond Awards, revealing the high regard in the market for our structuring and engagement work across green, social and sustainability bonds during 2021. In the *IFR* Awards 2022, we were named ESG Financing House of the Year. We were also recognised by *Euromoney* as the Best Bank for Sustainable Finance in Asia for the fifth consecutive year, and in the Middle East for the fourth.

Sustainable finance and investment
We define sustainable finance and investment as any form of financial service that integrates ESG criteria into business or investment decisions. This includes financing, investing and advisory activities that support the achievement of UN Sustainable Development Goals ('SDGs'), including but not limited to the aims of the Paris Agreement on climate change.

The SDGs, also known as the Global Goals, were adopted by all UN member states in 2015 as a universal call to action to end poverty, achieve gender equality, reduce inequality, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

We have reviewed and updated these definitions to reflect our updated climate ambition, which is available at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

$210.7bn
Cumulative progress since 2020 on our ambition to provide and facilitate sustainable finance and investment. (Ambition: $750bn to $1tn by 2030)

Embedding net zero transition into our client engagement

In 2022, we requested and assessed transition plans for EU and OECD managed clients in scope of our thermal coal phase-out policy. We also requested and are assessing transition plans for our major oil and gas clients. In 2023, we expect to complete assessments for remaining clients in scope of our thermal coal phase-out policy. Similarly, we expect to complete assessments for major oil and gas and power and utilities clients globally as well as other clients in EU and OECD markets in scope of our energy policy.

Our assessments consider historical emissions and disclosures, emissions reduction targets, details of transition plans to achieve targets, and evidence of activities in line with these plans. Our assessment framework helps us to understand our clients' transition plans, develop an engagement strategy to help support them on their transition journey and help us achieve our net zero ambition. We acknowledge that our assessment of client transition plans is in the initial stages and our engagement with clients on their plans and progress will need to continue to be embedded.

Supporting customers through transition continued

Financing the transition

We aim to help our customers transition to net zero and a sustainable future through providing and facilitating between $750bn and $1tn of sustainable finance and investment by 2030. Our sustainable finance ambition has promoted green, sustainable and socially-focused business alongside sustainable infrastructure and energy systems, and enhanced investor capital through sustainable investment.

Since 1 January 2020, we have provided and facilitated $185.3bn of sustainable finance, $19.0bn of sustainable investment and $6.4bn of sustainable infrastructure, as defined in our *Sustainable Finance and Investment Data Dictionary 2022*. This included 36% where the use of proceeds were dedicated to green financing, 13% to social financing, and 15% to other sustainable financing. It also included 27% of sustainability-linked financing and 9% of net new investments flows managed and distributed on behalf of investors.

In 2022, our underwriting of green, social, sustainability and sustainability-linked bonds for clients decreased in line with the overall market, although remained at 15% of our total bond issuances. On-balance sheet sustainable lending transactions increased by 53%, compared with 2021. The outstanding sustainable finance on-balance sheet position was in excess of $24bn at 31 December 2022.

Sustainability-linked bonds are a recent innovation in the debt capital markets, which allow investors to manage their sustainability strategies by linking targets, and progress towards them, to the issuers' financing costs. These products do not require definitions of use-of-proceeds as they are linked to issuers' broader sustainability commitments.

Issuer commitments and strategies continue to develop and be included in medium- to long-term sustainability plans. We expect that sustainability-linked bonds will become increasingly meaningful for transparency in issuer performance against science-based transition pathways and other sustainability goals. We have supported customers within the high transition risk sectors to issue sustainability-linked bonds which support the transition to the net zero economy and a sustainable future.

We are working closely with industry bodies, such as the International Capital Markets Association ('ICMA'), to establish a robust set of standards for the market. The ICMA Sustainability-Linked Bond Principles provide guidelines on what is core, material and relevant in terms of key performance indicators, and provides advice on how targets should be assessed.

Sustainable finance summary[1]	2022 ($bn)	2021 ($bn)	2020 ($bn)	Cumulative progress since 2020 ($bn)
Balance sheet-related transactions provided	**42.1**	26.0	10.3	**78.4**
Capital markets/advisory (facilitated)	**34.6**	48.7	30.0	**113.3**
Investments (assets under management – flows)	**7.5**	7.7	3.7	**19.0**
Total contribution[2]	**84.2**	82.4	44.1	**210.7**
Sustainable finance classification by theme				
Green use of proceeds[3]	**29.0**	27.1	18.8	**74.9**
Social use of proceeds[3]	**6.7**	11.3	9.7	**27.8**
Other sustainable use of proceeds[3,4]	**12.6**	11.7	8.3	**32.7**
Sustainability-linked[5]	**28.4**	24.6	3.5	**56.5**
Sustainable investments – Asset Management[6]	**7.5**	7.7	3.7	**19.0**
Total contribution[2,7]	**84.2**	82.4	44.1	**210.7**

1 This table has been prepared in accordance with our *Sustainable Finance and Investment Data Dictionary 2022*, which includes green, social and sustainability activities. The amounts provided and facilitated include: the limits agreed for balance sheet-related transactions provided, the proportional share of facilitated capital markets/advisory activities and the net new flows of sustainable investments within assets under management. In 2022, green liabilities were removed from the data dictionary, which resulted in $0.3bn removed from the published 2021 cumulative total.

2 The $210.7bn cumulative progress since 2020 is subject to limited assurance by PwC in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information'. For our *Sustainable Finance and Investment Data Dictionary 2022* and PwC's limited assurance report, see www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

3 For green, social and other sustainable use of proceeds, our capital markets products are aligned to either ICMA's Green Bond Principles, Social Bond Principles or Sustainability Bond Guidelines. Our lending labelled products are aligned to the LMA's Green Loan Principles, the LMA's Social Loan Principles or our sustainable trade instruments, which align the use of proceeds to the UN SDGs.

4 Sustainability use of proceeds can be used for green, social or a combination of green and social purposes.

5 Our sustainability-linked-labelled products are aligned to either the ICMA Sustainability-Linked Bond Principles or LMA Sustainability-Linked Loan Principles. The coupon or interest rate is linked to sustainability key performance indicators and the funds can be used for general purposes. Of the cumulative total of $56.5bn, $10.1bn relates to sustainability linked bonds and $46.4bn relates to sustainability linked loans. Within the sustainability linked loans, $13.1bn relates to lending to customers within the six high transition risk sectors (i.e. automobiles, chemicals, construction and building materials, Metals and mining, oil and gas, and power and utilities) as described on page 223.

6 Net flows of HSBC-owned sustainable investment funds that have been assessed against the *Sustainable Finance and Investment Data Dictionary 2022*.

7 Additional detailed information in relation to our sustainable finance and investment progress can be found in the *ESG Data Pack*.

Our approach to financing net zero

In 2022, we started developing a strategy to help us orient how we allocate our financing solutions and capital to support our clients' transition to net zero and help deliver a significant decarbonisation impact to the global economy. The approach, based on the IEA's Net Zero by 2050 scenario, identifies the infrastructure, technologies and new business models critical for industries to transition to net zero. We recognise that we will need to adapt our capabilities in specific products and sectors to capture business opportunities and help finance the transition. In 2022, we made several investments to play a catalytic role, including through Pentagreen Capital, an innovative financing vehicle set up in partnership with Temasek, to accelerate sustainable infrastructure in south-east Asia, and with Breakthrough Energy Catalyst to gain expertise in nascent, 'new-economy, sectors aligned with our clients' net zero ambitions.

- Our data dictionary defining our sustainable finance and investments continues to evolve, and is reviewed annually to take into account the evolving standards, taxonomies and practices we deem appropriate. Our review involves reviewing and strengthening our product definitions, where appropriate adding and deleting qualifying products, making enhancements to our internal standards, and evolving reporting and governance. Our progress will be published each year, and we will seek to continue for it to be independently assured.
- The detailed definitions of the contributing activities for sustainable finance and investment are available in our revised *Sustainable Finance and Investment Data Dictionary 2022*. For our *ESG Data Pack*, *Sustainable Finance and Investment Data Dictionary* and third-party limited assurance report, see www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Supporting customers through transition continued

Responsible and sustainable investment
We offer a broad suite of ESG capabilities across asset management, global markets, wealth, private banking and securities services, enabling institutional and individual investors to generate financial returns, manage risk and pursue ESG-related opportunities.

Our Asset Management business seeks to drive innovation at scale, and bring new propositions to the market for investors, including sustainable exchange-traded funds and lower-carbon investment solutions. We are committed to further developing our sustainable product range across asset classes and strategies, as well as enhancing our existing product set for ESG criteria where it is in the investors' interests to do so. In 2022, we launched 24 funds with a sustainable focus.

In our aim to support the transition to more sustainable ways of dealing with resources and waste, through the circular economy, HSBC Asset Management launched the HSBC Global Investment Fund ('HGIF') Global Equity Circular Economy fund.

To support its net zero ambition, HSBC Asset Management continued to add to the range of products aligned to Paris-aligned benchmarks, launching two exchange-traded funds in 2022 that invest in emerging markets and Asia-Pacific. These benchmarks' underlying assets are selected in such a manner that the resulting benchmark portfolio's greenhouse gas emissions are aligned with the long-term global warming target of the Paris Agreement.

In 2022, HSBC Asset Management's fixed income, equity and stewardship teams held over 1,000 meetings with companies in our portfolios. These included discussions on climate-related matters, with more than 60 of these having specific, targeted outcomes with climate objectives. We continue to engage with issuers, encouraging the reporting of emissions data, the setting of emissions reduction targets, the assessment of climate risk, and the development of robust transition strategies.

We expanded our investment offering for private banking and wealth clients with the launch of 22 sustainable investing mutual funds and exchange-traded funds in 2022. We offer a range of sustainable investment products across other asset classes, including equities, fixed income, discretionary and alternatives. We enhanced our ESG thematic products offering linked to indices. For example, we collaborated with Euronext and Iceberg Datalab to design the first broad-based biodiversity screened equity index family.

At HSBC Life, our insurance business, we are focused on ensuring our customers have more access to ESG investment fund options aligned to their ESG preferences. ESG funds invest only in companies with strong ESG credentials or in key ESG-related areas. We increased the availability of ESG investment fund options within our investment-linked products. During 2022, we launched in Hong Kong a new protection-linked plan with three ESG fund choices now available, and we launched our first ESG fund in Mexico.

First ESG underwriting guide for life and health insurance

Our insurance business, HSBC Life, co-sponsored and co-led the first ESG underwriting guide for the life and health insurance sector. The guide was published by the United Nations Environment Programme Finance Initiative ('UNEP FI') Principles for Sustainable Insurance, a set of principles endorsed by the United Nations and the insurance industry.

This guide, which was published in June 2022, provides a framework for life and health insurers to evaluate a range of ESG risks and factors on the mortality, morbidity, longevity and hospitalisation risks when underwriting.

These include risk mitigation strategies alongside best practices for insurers to consider.

The guide was put together in collaboration with a global team of sustainability experts from 11 other member companies of the UNEP FI Principles for Sustainable Insurance. Its purpose is to reinforce the key role insurers need to play in helping to solve the major ESG challenges of our time, such as the spread of infectious diseases, biodiversity and nature loss, social inequality, and mental health and well-being.

Accelerating growth in geothermal and recovered energy

Ormat Technologies Inc., which has been operating in renewable energy production for more than 50 years, has developed expertise and global experience in the supply and development of geothermal, recovered energy and energy storage solutions. We supported Ormat in June 2022 with the issuance of a $431m green convertible bond, the proceeds of which will support Ormat grow its business and develop its renewable green energy projects.

Ormat now has a total generating portfolio of approximately 1.1 gigawatts, including a geothermal and solar generation portfolio across the US, Kenya, Guatemala, Indonesia, Honduras and Guadeloupe, as well as holding an energy storage portfolio in the US.

Unlocking climate solutions and innovations TCFD

We understand the need to find new solutions to increase the pace of change if the world is to achieve the Paris Agreement's goal of being net zero by 2050.

We are working closely with a range of partners to accelerate investment in natural resources, technology and sustainable infrastructure to help reduce emissions and address climate change.

Sustainable infrastructure
Addressing climate change requires the rapid development of a new generation of sustainable infrastructure, particularly for emerging markets.

During 2022, we demonstrated our commitment to catalysing financing for sustainable infrastructure projects, with the launch of Pentagreen Capital, a debt financing vehicle we set up in partnership with Temasek (see below).

We continue to take a leading role in the FAST-Infra initiative, which we helped conceive, working with the IFC, OECD, the World Bank's Global Infrastructure Facility and the Climate Policy Initiative, under the auspices of the One Planet Lab. Through the FAST-Infra initiative, we helped launch in 2021 the Sustainable Infrastructure (SI) Label – a consistent, globally applicable labelling system designed to identify and evaluate sustainable infrastructure assets. The initiative continues to grow, with the appointment in November 2022 of a consortium with global expertise in sustainability standards, global finance, software and data platforms, to manage the secretariat of the SI Label, so the label becomes an enduring and widely adopted standard.

Natural capital as an emerging asset class
Climate Asset Management, a joint venture we launched with Pollination in 2020, forms part of our goal to unlock new climate solutions. Combining expertise in investment management and natural capital, Climate Asset Management offers investment solutions that generate competitive risk-adjusted returns for investors, and nature-enhancing ecosystems to help protect biodiversity and accelerate the transition to net zero.

In December 2022, Climate Asset Management announced it had received commitments of over $650m for its two strategies:

- the Natural Capital Strategy, which invests in agriculture, forestry and environmental assets, with the aim to deliver impact at scale alongside long-term financial returns; and
- the Nature Based Carbon Strategy, which targets nature restoration and conservation projects in developing economies, prioritising community benefits while generating high-quality carbon credits.

One of Climate Asset Management's first investments was the Restore Africa Programme, in partnership with the Global EverGreening Alliance, announced in November 2021. The programme, which is the world's largest community-based land-restoration project, aims to benefit 1.5 million smallholder farmers and their communities through the restoration of up to 2 million hectares of degraded land across six sub-Saharan countries. The programme has started being implemented in Kenya, Uganda and Malawi, with plans for Zambia, Tanzania and Ethiopia to follow in 2023.

Climate Asset Management is a founding member of the Natural Capital Investment Alliance, whose 15-strong membership of investment firms aims to have mobilised $10bn towards nature-based economic themes.

Backing new technology and innovation
Addressing climate change requires innovative ideas. By connecting financing with fresh thinking, we can help climate solutions to increase in scale to support sustainable growth.

We continue to unlock new climate solutions, focusing on supporting innovation in critical areas such as green technologies. In January 2022, we announced our investment of $100m as an anchor partner in Breakthrough Energy Catalyst, a programme that uses private-public capital to accelerate the development of four critical climate technologies: direct air capture, clean hydrogen, long-duration energy storage and sustainable aviation fuel.

Our philanthropic programme, Climate Solutions Partnership, aims to scale up climate innovation ventures and nature-based solutions, as well as help the energy sector transition towards renewable sources in Asia (for further details, see page 84).

Our climate technology venture debt and venture capital platforms invest in companies that are developing innovative technological solutions that help companies and governments understand, track and reduce their greenhouse gas emissions. We expanded our venture debt platform to support climate technology hardware and software companies that are growing rapidly. In 2022, we achieved our initial goal to fund $100m to climate technology companies through this platform, and consequently increased our commitment to $250m. In 2022, we committed an additional $100m to fund women and minority entrepreneurs through our venture debt platform.

HSBC Asset Management also launched a venture capital strategy that invests in transformative early stage companies enabling decarbonisation and de-pollution of industries. The strategy invests across four investment themes: power transformation, transport electrification, supply chain sustainability and climate risk mitigation. We seeded the strategy with capital in November 2021, and it has since invested in three start-up companies. HSBC Asset Management continues to actively fundraise for this strategy, aiming to raise additional funds from institutional and private wealth clients over the course of 2023.

Accelerating sustainable infrastructure in Asia

In August 2022, we officially launched Pentagreen Capital, a sustainable infrastructure debt financing vehicle set up in partnership with Temasek. Pentagreen's goal is to accelerate the development of sustainable infrastructure in Asia by removing the barriers that can prevent marginally bankable projects from accessing capital. With a combined $150m of seed capital committed by the founding partners, the Singapore-based company aims to provide more than $1bn of loans over the next five years, targeting opportunities initially in south-east Asia. Its primary focus will be on clean transport, renewable energy and energy storage, and water and waste management.

Biodiversity and natural capital strategy

We recognise that achieving net zero goes hand in hand with halting and reversing nature loss. Nature loss, which refers to the decline of natural capital, ecosystem services and biodiversity, is one of the greatest systemic risks to the global economy and the health of people and the planet. According to The Nature Conservancy, natural climate solutions can provide up to 37% of the emission reductions needed by 2030. At the same time climate change is accelerating nature loss, and consequently the ability for nature to mitigate climate change impacts.

We understand we need to do more to embed nature-related issues into our sustainability policies and climate transition plan, and we are committed to strengthening our risk management approach and engaging with our customers.

Understanding our exposure
In 2022, we made progress with understanding how to assess and monitor nature-related risks, as well as how to create effective transition plans with the aim of halting our contribution to nature loss from our business activities:

- We conducted analysis on how reliant our large corporate clients were on ecosystem services, including the nature-related benefits crucial for the provision of food and drinking water, which demonstrated that our clients were highly dependent on water availability.
- To improve our understanding of the potential credit risks that nature-related risks pose to our customers, we worked with the Cambridge Institute on Sustainability Leadership, by evaluating the impact of three months of water shortage on a sample of our customer portfolio comprising heavy industry companies in east Asia.
- We participated in a pilot test of a draft version of the Taskforce on Nature-related Financial Disclosures ('TNFD') framework for risk and opportunity management and disclosure, which helped us understand its implications and provide feedback ahead of its release in September 2023.
- We intend to publish a new deforestation policy, informed by scientific and international guidance, in 2023. For further details of our biodiversity and natural capital-related policies, see 'Our approach to sustainability policies' on page 65.

Reducing nature loss
We are making progress with the investment and financing of biodiversity and nature-based solutions through client products and services and partnerships. In 2022, these included:

- In August 2022, our asset management business, HSBC Asset Management, launched a biodiversity exchange-traded fund that enables investors to incorporate sustainable considerations within their portfolios (see below).
- Our Global Private Banking business launched a biodiversity strategy for our private bank clients in Hong Kong and Singapore, which focuses on investing in companies that are well positioned to harness, regenerate and protect biodiversity through the circular and bio-based economy.
- Through the Climate Solutions Partnership, our philanthropic collaboration with the World Resources Institute and WWF, we issued two reports on the hurdles and success factors for scaling up nature-based solutions.

For further details of our approach to nature and related initiatives, see our Statement on Nature in the ESG reporting centre at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Our presence in environmentally sensitive areas
As a global organisation, our branches, offices and data centres may be located in – or near – areas of water stress and/or protected areas of biodiversity, as we support our customers and communities in these locations.

Approximately 58.5% of our global offices, branches and data centres are located in areas identified as being subject to high and very high water stress, accounting for 39.7% of our annual water consumption. These are predominantly urban or city centre locations with large, concentrated populations. Our industry is a low user of potable water, and we have implemented measures to further reduce water consumption through the installation of flow restrictors, auto-taps and low or zero flush sanitary fittings.

In addition, 1.6% of our global office, branch and data centre portfolio lies in protected areas and areas of biodiversity. We strive through our design, construction and operational standards to ensure that, where possible, our premises do not adversely affect the environment or natural resources in these areas.

Building biodiversity risk awareness into ETFs

Asset owners and managers have a role to play in addressing potential transition and physical risks. Our asset management business, HSBC Asset Management, launched the first of its kind biodiversity screened exchange-traded fund, which provides investors with the opportunity to consider biodiversity risk factors in their portfolios. This exchange-traded fund tracks the Euronext ESG Biodiversity Screened Index series, which was jointly developed by HSBC, Euronext and Iceberg Data Lab. The Biodiversity Footprint Score excludes companies from the index that do not sufficiently consider biodiversity impacts as well as those with poor ESG credentials and/or business activities deemed harmful towards biodiversity.

Our approach to our own operations TCFD

Part of our ambition to be a net zero bank is to achieve net zero carbon emissions in our operations and supply chain by 2030 or sooner.

Reduce, replace and remove
We have three elements to our strategy: reduce, replace and remove. We plan to first focus on reducing carbon emissions from consumption, and then replacing remaining emissions with low-carbon alternatives in line with the Paris Agreement. We plan to remove the remaining emissions that cannot be reduced or replaced by procuring, in accordance with prevailing regulatory requirements, high-quality offsets at a later stage.

Our energy consumption
In October 2020, we announced our ambition to reduce our energy consumption by 50% by 2030, against a 2019 baseline, and in 2022 we achieved 24%. We plan to do this by optimising the use of our real estate portfolio, and carrying out a strategic reduction in our office space and data centres. We are using new technology and emerging products to make our spaces more energy efficient, such as in the UK, where an additive to our boiler systems helped make heating in our branches 13% more efficient.

As part of our ambition to achieve 100% renewable power across our operations by 2030, we continue to look for opportunities to procure green energy in each of our markets. A key challenge remains the limited opportunity to pursue power purchase agreements or green tariffs in key markets due to regulations.

We are tracking the impact on our emissions from our colleagues working from home, as they continue to embrace more flexible ways of working. We calculated the electricity used by our colleagues working from home was 5% of our total electricity consumption in 2022. This only includes energy consumption from the IT equipment and lighting. We do not report employee home working emissions in our scope 1 and 2 performance data.

Business travel and employee commuting
In 2022, our travel emissions remained below 50% of pre-pandemic levels in 2019, with international travel restrictions remaining for much of the year in key Asia markets, slowing the return to business travel. We are closely managing the gradual resumption of travel through internal reporting and review of emissions, and through the introduction of internal carbon budgets, in line with our aim to halve travel emissions by 2030, compared with pre-pandemic levels. With hybrid working embedded across the organisation, the use of virtual working practices has reduced the need for our colleagues to travel to meet with other colleagues and customers. We continue to focus on reducing the environmental impact from the vehicles we use in our global markets, and accelerate the use of electric vehicles. In 2022, we reduced the company car fleet size by 24%. We are now aiming to ensure that all new vehicles ordered are fully electric or hybrid vehicles where possible.

Engaging with our supply chain
Our supply chain is critical to achieving our net zero ambitions, and we are partnering with our suppliers on this journey. In 2020, we began the three-year process of encouraging our largest suppliers to make their own carbon commitments, and to disclose their emissions via the CDP (formerly the Carbon Disclosure Project) supply chain programme. The target for 2022 was for suppliers representing 60% of total supplier spend to have completed the CDP questionnaire. In total, suppliers representing 63.5% of total supplier spend completed the CDP questionnaire.

We will continue to engage with our supply chain through CDP, and through direct discussions with our suppliers on how they can further support our transition to net zero.

In 2022, we also formalised our supply chain sustainability strategy through the update of our supplier code of conduct and the development of our sustainable procurement procedures. The new procedures set out the minimum requirements and operational information required to help ensure our sustainability objectives relating to climate change, the environment, human rights, and diversity and inclusion are clearly addressed in the way that we operate and conduct business with suppliers.

Focus on natural resources
Alongside our net zero operations ambition, our aim is to be a responsible consumer of natural resources. Through design, construction and operational standards, we strive to ensure that, wherever possible, our premises do not adversely affect the environment or natural resources. We have identified specific focus areas including waste, paper and sustainable diets, and are exploring key opportunities to reduce our wider environmental impact over the coming decade.

Our environmental and sustainability management policies

Our buildings policy recognises that regulatory and environmental requirements vary across geographies and may include environmental certification. The policy is supported by Corporate Services procedures on environmental and sustainability management, ensuring HSBC's properties continually reduce their overall direct impact on the environment. Detailed design considerations documented in our Global Engineering Standards aim to reduce or avoid depletion of critical resources like energy, water, land and raw materials. Suppliers are required to adhere to strict environmental management principles and reduce their impact on the environment in which they operate.

Our approach to our own operations continued

Emissions from our energy and travel in 2022

We report our emissions following the Greenhouse Gas Protocol, which incorporates the scope 2 market-based emissions methodology. We report greenhouse gas emissions resulting from the energy used in our buildings and employees' business travel. Due to the nature of our primary business, carbon dioxide is the main type of greenhouse gas applicable to our operations. While the amount is immaterial, our current reporting also incorporates methane and nitrous oxide for completeness. We do not report employee home working emissions in our scope 1 and 2 performance data. Our environmental data for our own operations is based on a 12-month period to 30 September.

In 2022, we continued to decrease our emissions from our energy consumption and travel, achieving a 58.5% reduction compared with our 2019 baseline. This was mainly attributed to travel restrictions and the reduction of usage of our buildings due to the Covid-19 pandemic. We also implemented over 400 energy conservation measures that amounted to an estimated energy avoidance in excess of 11.9 million kWh and increased our consumption of renewable electricity to 48.3%.

In 2022, we collected data on energy use and business travel for our operations in 28 countries and territories, which accounted for approximately 92.4% of our FTEs. To estimate the emissions of our operations in entities where we have operational control and a small presence, we scale up the emissions data from 92.4% to 100%. We then apply emission uplift rates to reflect uncertainty concerning the quality and coverage of emission measurement and estimation. This is consistent with both the Intergovernmental Panel on Climate Change's Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and our internal analysis of data coverage and quality.

For further details on our methodology and relevant environmental key facts, see the *ESG Data Pack* at www.hsbc.com/esg.

Energy and travel greenhouse gas emissions in tonnes CO_2e

		2022	2021
Scope 1[1]	▼	**19,000**	22,000
Scope 2[1]	▼	**224,000**	307,000
Scope 3 (category 6) business travel[1]	▲	**42,000**	12,000
Total	▼	**285,000**	341,000
Included energy UK	▼	**9,000**	10,000

Greenhouse gas emissions in tonnes CO_2e per FTE

		2022	2021
Total	▼	**1.30**	1.52

Energy consumption in kWh in 000s

		2022	2021
Total Group	▼	**797,000**	833,000
UK only	▼	**222,000**	227,000

1 Data in 2022 is subject to PwC's limited assurance report in accordance with International Standard on Assurance engagements 3410 (Assurance Engagements on Greenhouse Gas Statements). For further details, see GHG Reporting Guideline 2022 and third-party limited assurance report at www.hsbc.com/our-approach/esg-information/esg-reporting-and-policies.

Emissions from our supply chain in 2022

		Emissions (tonnes CO_2e)			Data quality score[1]	
Scope 3 categories	**Year**	Scope 1–2	Scope 3	Total	Scope 1–2	Scope 3
Category 1 – Purchased goods and services [2, 3]	**2022**	218,000	648,000	866,000	3.1	3.3
	2021	252,000	617,000	869,000	3.0	3.3
Category 2 – Capital goods [2, 3]	**2022**	30,000	114,000	144,000	3.1	3.4
	2021	31,000	96,000	127,000	3.1	3.3

The data we receive through our engagement with CDP has enabled us to report our supply chain emissions for the first time. Our methodology uses supplier emissions data where we have it from 500 of our largest suppliers, through CDP. Where we do not have emissions data for suppliers, we use industry average carbon intensities and spend data to define the contribution to our supply chain emissions. As more of our suppliers report their emissions, we should be able to include more accurate data and fewer industry averages in the calculation. We have applied a data quality score to the sources of data we used to determine counterparty emissions. Our initial supply chain emission figures may require updating as data availability changes over time and methodology and climate science evolve. For further details, see our GHG Reporting Guidance.

In 2022, emissions from our supply chain increased by 16% compared with 2019, as a result of an increase in spend – particularly in IT services – and a rise in the average carbon intensity of our suppliers. The CDP-provided industry averages rose, increasing the emissions for our suppliers where we do not have emissions data. However, in 2022 there was a decrease in carbon intensity of suppliers who disclose their emissions compared with 2021, particularly in servers and data centres. While the carbon intensity of our supply chain decreased, a rise in spend on services in 2022 led to a 1% increase in emissions compared with 2021.

1 Data quality scores where 1 is high and 5 is low, based on the quality of emissions data. This is a weighted average score based on HSBC supplier spend and is in line with HSBC's financed emissions reporting methodology

2 Supply chain emissions calculated using a combination of supplier emissions data and industry averages.

3 Data in 2019, 2020, 2021 and 2022 for scope 3 (purchased goods and service) and scope 3 (capital goods) is subject to PwC's limited assurance report in accordance with International Standard on Assurance engagements 3410 (Assurance Engagements on Greenhouse Gas Statements). For further details, see GHG Reporting Guideline 2022 and third-party limited assurance report at www.hsbc.com/our-approach/esg-information/esg-reporting-and-policies.

Our approach to climate risk TCFD

Managing risk for our stakeholders

Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a greener economy. We manage climate risk across all our businesses and are incorporating climate considerations within our traditional risk types in line with our Group-wide risk management framework. Our most material exposure to climate risk relates to corporate and retail client financing activity within our banking portfolio. We also have significant responsibilities in relation to asset ownership by our insurance business, employee pension plans and asset management business. In the table below, we set out our duties to our stakeholders in our four most material roles.

For further details of our approach to climate risk, see 'ESG risk' on page 139 and 'Climate risk' on page 221.

Banking
We manage the climate risk in our banking portfolios through our risk appetite and policies for financial and non-financial risks.

This helps enable us to identify opportunities to support our customers, while continuing to meet stakeholder expectations.

Employee pensions
Our pension plans manage climate risk in line with their fiduciary duties towards members and local regulatory requirements.

We monitor climate risk exposure internally for our largest plans based on asset sector allocation and carbon emissions data where available.

Asset management
Climate risk management is a key feature of our investment decision making and portfolio management approach.

We also engage with companies on topics related to climate change.

Insurance
We consider climate risk in our portfolio of assets.

We have established an evolving ESG programme to meet changing external expectations and customer demands.

Climate risk

Banking

Our banking business is well positioned to support our customers managing their own climate risk through financing. For our wholesale customers, we use our transition and physical risk questionnaire as part of our risk framework to understand their climate strategies and risk. We have set out a suite of policies to guide our management of climate risk, including our recently updated energy policy and thermal coal phase-out policy (see page 65). We continue to develop our climate risk appetite and utilise metrics to help manage climate exposures in our wholesale and retail portfolios. Climate scenario analysis is used as a risk assessment tool to provide insights on the long-term effects of transition and physical risks across our corporate and retail banking portfolios, as well as our own operations (for further details, see page 67).

Asset management

HSBC Asset Management managed over $608bn assets at the end of 2022, of which more than $55bn were held in sustainable investments. The majority of the remaining assets were invested in ESG-integrated strategies.

When assessing the impact of climate-related risk to our portfolios, we are increasingly considering both physical and transition risks. As a result, we have integrated ESG and climate analysis to help ensure that risks faced by companies are considered throughout the investment decision-making process. Investment teams through portfolio management tools assess, examine and determine the level of potential ESG risks that could impact the current and future value of issuers.

One of our key approaches to manage climate risk is through engaging with the companies we invest in. Our HSBC Asset Management Stewardship Plan outlines our approach to engaging with issuers, including on the topic of climate change.

Employee pensions

The Trustee of the HSBC Bank (UK) Pension Scheme, our largest plan with $33bn assets under management, aims to achieve net zero greenhouse gas emissions across its defined benefit and defined contribution assets by 2050. To help achieve this, it is targeting an interim emissions reduction of 50% by 2030, from 2019 levels, for its equity and corporate bond mandates. This commitment was made in the context of wider efforts to manage the impact of climate change on the Scheme's investments and the consequent impact on the financial interests of members.

During 2022, a framework was put in place to assess progress towards the 2030 targets. The Scheme, which has reported emission reductions for the equity and corporate bond mandates between 2019 and 2021, will continue to report against the 2030 targets, and aim to widen the coverage of its assessment and reporting over time.

For further details of the HSBC Bank (UK) Pension Scheme's annual TCFD statements and climate action plan, see https://futurefocus.staff.hsbc.co.uk/active-dc/information-centre/other-information.

Insurance

In 2022, our Insurance business, which has life insurance manufacturing subsidiaries in eight markets and total assets under management of approximately $126bn, updated its sustainability policy to align with the Group's new thermal coal phase-out policy. An ESG policy on corporate underwriting was also introduced.

Risk appetite was reviewed relating to key ESG aspects. ESG standards were embedded into insurance product development processes and operational capabilities.

In response to multiple and differing ESG regulatory initiatives and developments, HSBC's insurance entities in the EU have implemented key disclosure-related regulatory requirements. These requirements mainly impact insurance-based investment products manufactured by HSBC entities in the EU. Related requirements for the UK and other jurisdictions are expected to be introduced in the near future.

Our approach to sustainability policies TCFD

We recognise that businesses can have an impact on the environment, individuals and communities around them. We continue to develop, implement and refine our approach to working with our business customers to understand and manage these issues. We have joined various partnerships to support our role in this, including the World Economic Forum's Principles for Financing a Just and Urgent Energy Transition.

Our policies
Our sustainability risk policies cover agricultural commodities, chemicals, energy, forestry, mining and metals, thermal coal, UNESCO World Heritage Sites and Ramsar-designated wetlands. We also apply the Equator Principles when financing projects.

These policies define our appetite for business in these sectors and seek to encourage customers to meet good international standards of practice. Where we identify activities that could cause material negative impacts, we will only provide finance if we can confirm clients are managing these risks responsibly. Such customers are subject to greater due diligence and generally require additional approval by sustainability risk specialists.

Our sustainability policies are aligned with our approach to climate risk, and our net zero ambition.

For further details on how we manage sustainability risk, as well as our full policies, see www.hsbc.com/our-approach/risk-and-responsibility/sustainability-risk.

Supporting the transition
Reinforcing our ambition to support our clients' transition to lower carbon through transition financing, we updated our thermal coal phase-out policy, which we explain further on the following page, as well as our energy policy, which we set out below.

Governance and implementation
HSBC's relationship managers are the primary point of contact for our customers and are responsible for checking whether our customers meet applicable policies. Within our Group Risk and Compliance function, we have reputational and sustainability risk specialists who are responsible for reviewing, implementing and managing our sustainability risk policies as well as our application of the Equator Principles. Our global network of more than 75 sustainability risk managers is supported by regional reputational risk managers across the Group who have additional oversight responsibilities for sustainability risk.

The Wholesale Reputational and Sustainability Risk team also became part of Risk Strategy, with expanded Group-wide responsibilities, to strengthen the governance and oversight of sustainability risk policies, and to reflect the evolution of the sustainability agenda.

The Sustainability Risk Oversight Forum, made up of senior members of the Group Risk and Compliance function and global businesses, continued to oversee the development and implementation of policies that seek to identify, manage and mitigate the Group's sustainability risk.

As part of our oversight of sustainability risk policies, we operate an assurance framework that is designed to take a more holistic view of risks, including by:

- ESG news screening, taking a risk-based approach, across the sustainability risk policies;
- overseeing clients considered to be of higher risk;
- reviewing client files across the sustainability risk policies; and
- monitoring of the sustainability risk client portfolio against a defined set of key control indicators overseen by the Sustainability Risk Oversight Forum.

The framework is used to monitor the in-scope portfolio and keep track if there is a deterioration in the risk ratings. With the respective risk rating assigned, our sustainability risk specialists will agree the necessary actions to help mitigate unacceptable risks with the business.

Where considered appropriate, a submission can be made to the Reputational Risk and Client Selection Committee to agree an appropriate course of action.

Our energy policy

In December 2022, we published our updated policy covering the broader energy system, including upstream oil and gas, oil and gas power generation, hydrogen, renewables and hydropower, nuclear, biomass and energy from waste. The policy seeks to balance three related objectives: supporting the reduction of global greenhouse gas emissions; enabling an orderly transition that builds resilience in the longer term; and supporting a just and affordable transition. Central to our approach is our commitment to supporting clients who are taking an active role in the transition.

In line with the policy, we will no longer provide new finance or advisory services for the specific purpose of projects pertaining to new oil and gas fields and related infrastructure whose primary use is in conjunction with new fields. Engagement on transition plans is a key part of our approach. We will continue to provide finance or advisory services to energy sector clients at the corporate level, where clients' transition plans are consistent with our 2030 portfolio-level financed emissions targets and net zero by 2050 commitment. If a client's transition plan is not produced, or if, after repeated engagement, is not consistent with our targets and commitments, we will not provide new finance and may withdraw existing financing.

The IEA's 2021 Net Zero by 2050 report highlights that an orderly transition requires continued financing and investment in existing oil and gas fields to maintain the necessary output. We will therefore continue to provide finance to maintain supplies of oil and gas in line with current and future declining global oil and gas demand, while accelerating our activities to support clean energy deployment.

As part of our previously announced ambition to provide $750bn to $1tn in sustainable finance and investment by 2030 to support our customers in all sectors, we will support critical areas such as renewable energy and clean infrastructure.

Our approach to sustainability policies continued

Our thermal coal phase-out policy
In December 2021, we published a policy to phase out thermal coal financing in EU and OECD markets by 2030, and globally by 2040. This incorporated project finance, direct lending, and arranging or underwriting of capital markets transactions to in-scope clients, as well as the refinancing of existing finance facilities.

In line with our commitment to review our policy and targets each year, taking into account evolving science and internationally recognised guidance, we expanded the policy in 2022. We committed to not provide new finance or advisory services for the specific purposes of the conversion of existing coal-to-gas-fired power plants, unless the client demonstrates to us its intention to transition to abated power generation, consistent with our targets and commitments; and the plants do not operate in environmentally or socially critical areas. We also committed to not provide new finance or advisory services for new metallurgical coal mines. With the updated policy, we additionally committed to:

- reduce absolute on-balance sheet finance emissions by 70% in both the thermal coal power and thermal coal mining sectors by 2030;
- apply an amended definition of thermal coal expansion as it pertains to mergers and acquisitions activity; and
- decline new relationships with companies that operate thermal coal assets in environmentally and socially critical areas.

Biodiversity and natural capital-related policies
Our sustainability risk policies restrict financing activities that have material negative impacts on nature. While a number of our sectoral policies have such restrictions, our forestry and agricultural commodities policies focus specifically on a key impact: deforestation. These policies require customers involved with major deforestation-risk commodities to operate in accordance with sustainable business principles, as well as require palm oil customers to obtain certification and commit to 'No Deforestation, No Peat and No Exploitation' (see 'Our respect for human rights' on page 87). While we seek to work with our clients to help ensure their alignment with our policies, we have withdrawn banking services to customers who have not engaged, for example, in meeting our certification requirements.

As part of our net zero commitment, we are reviewing our current policy protections in this area, and aim to release a revised policy, informed by scientific and international guidance, in 2023.

For further details of our approach to biodiversity and natural capital-related activities, see 'Biodiversity and natural capital strategy' on page 61.

Exposure to thermal coal
In our thermal coal policy published in December 2021, we disclosed our intention to reduce thermal coal financing exposure by at least 25% by 2025, and by 50% by 2030, using our 2020 Task Force on Climate-related Financial Disclosures ('TCFD') as our baseline. Using the same methodology and data used in our baseline reporting as at 31 December 2020, we are making progress against these targets.

Our 2020 baseline comprised thermal coal power generation and mining exposures within the power and utilities, and metals and mining sectors, as defined in our TCFD disclosures. We are in the process of expanding the on-balance sheet exposures that are in-scope for our thermal coal policy to include those outside of these two TCFD sectors.

Our processes, systems, controls and governance are not yet designed to fully identify and disclose thermal coal exposures, particularly for exposures within broader conglomerates. Until our systems, processes, controls and governance are enhanced, certain aspects of our reporting will rely on manual sourcing and categorisation of data. We are reassessing the reliability of our data and reviewing our basis of preparation to help ensure that we are reporting all relevant thermal coal exposures aligned to our thermal coal policy. As a result, we have not reported thermal coal exposures in this *Annual Report and Accounts 2022*. We expect that our updated thermal coal exposures dating back to 31 December 2020 will be made available for reporting as soon as practicable in 2023, although this is dependent on availability and quality of data.

Thermal coal financed emissions targets
As mentioned earlier, our financed emissions target is a reduction of 70% in both the thermal coal power and thermal coal mining sectors by 2030, using a 2020 baseline. We now intend to publish our baseline financed emissions alongside our updated thermal coal exposures as mentioned above.

Asset management policy

In September 2022, our asset management business, HSBC Asset Management, published its own policy on how a phase-out of thermal coal would impact on investments it makes on behalf of clients.

The policy aligns with the commitment made by HSBC Asset Management under the Net Zero Asset Managers initiative to support investing aligned with net zero greenhouse gas emissions by 2050, or sooner.

Under its policy, HSBC Asset Management will not hold listed securities of issuers with more than de minimis revenue exposure to thermal coal in its actively managed portfolios beyond 2030 for EU and OECD markets, and 2040 for all other markets. The policy includes some restrictions on investment exposure to thermal coal ahead of these deadlines, as well as commitments to undertake enhanced due diligence on the transition plans of investee companies with thermal coal exposure. Companies held in investment portfolios that do not develop credible plans to transition away from thermal coal could face voting sanctions, and ultimately a divestment of holdings.

For further details of the policy, see www.assetmanagement.hsbc.co.uk/-/media/files/attachments/common/coal-policy-b2b-en-09162022.pdf.

Insights from scenario analysis TCFD

Scenario analysis supports our strategy by assessing our position under a range of climate scenarios. It helps to build our awareness of climate change, plan for the future and meet our growing regulatory requirements.

Having run our first Group-wide climate change scenario analysis exercise in 2021, we produced several climate stress tests for global regulators in 2022, including the Monetary Authority of Singapore and the European Central Bank. We also conducted our first internal climate scenario analysis.

We continue to develop how we produce our climate scenario analysis exercises so that we can have a more comprehensive understanding of climate headwinds, risks and opportunities that will support our strategic planning and actions.

In climate scenario analysis, we consider, jointly:

- transition risk arising from the process of moving to a net zero economy, including changes in policy, technology, consumer behaviour and stakeholder perception, which could each impact borrowers' operating income, financing requirements and asset values; and
- physical risk arising from the increased frequency and severity of weather events, such as hurricanes and floods, or chronic shifts in weather patterns, which could each impact property values, repair costs and lead to business interruptions.

We also analyse how these climate risks impact how we manage other risks within our organisation, including credit and market risks, and on an exploratory basis, operational, liquidity, insurance, and pension risks.

Our climate scenarios

In our 2022 internal climate scenario analysis exercise, we used four scenarios that were designed to articulate our view of the range of potential outcomes for global climate change.

These scenarios, which reflect different levels of physical and transition risk and are varied by severity and probability, were: the Net Zero scenario, which aligns with our net zero strategy and is consistent with the Paris Agreement; the Current Commitments scenario, which assumes that climate action is limited to the current governmental commitments and pledges; the Downside Transition Risk scenario, which assumes that climate action is delayed until 2030; and the Downside Physical Risk scenario, which assumes climate action is limited to current governmental policies.

For further details of these scenarios, and how they were designed to identify, measure and assess our material climate vulnerabilities, see 'Insights from scenario analysis' in the 'Climate risk' section on page 226.

Analysing the outputs

Climate scenario analysis allows us to model how different potential climate pathways may affect our customers and portfolios, particularly in respect of credit losses. As the chart below shows, losses are influenced by their exposure to a variety of climate risks under different climate scenarios.

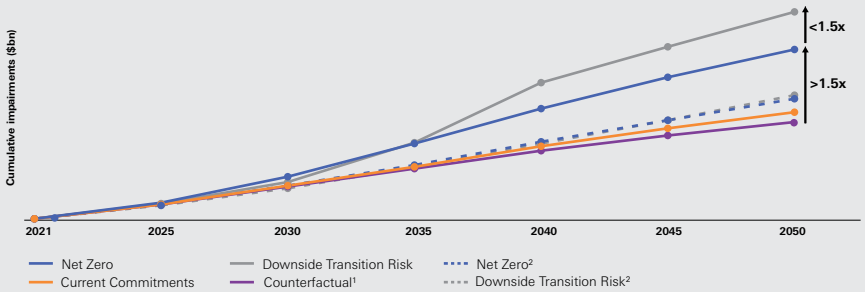
Under the Current Commitments scenario, we expect moderate levels of losses relating to transition risks. However, the rise in global warming will lead to increasing levels of physical risk losses in later years. A gradual transition towards net zero, as shown in the Net Zero scenario, still requires fundamental shifts in our customers' business models, and significant investments. This will have an impact on profitability, leading to higher credit risk in the transition period. A delayed transition will be even more disruptive due to lower levels of innovation that limits the ability to decarbonise effectively, and rising carbon prices that squeeze profit margins.

Overall, our scenario analysis shows that the level of credit losses can be mitigated if we support our customers in enhancing their climate transition plans.

For the full internal climate scenario analysis, including our assessment of the impacts of climate change on our corporate lending, retail mortgage and commercial real estate portfolios, see Insights from scenario analysis on page 226.

Modelled climate losses

How credit losses from climate risks have been modelled under different scenarios.[1]



1 The counterfactual scenario is modelled on a scenario where there will be no losses due to climate change.
2 The dotted lines in the chart show the impact of modelled expected credit losses following our strategic responses to reduce the effect of climate risks under the Net Zero and Downside Transition Risk scenarios.

Use of climate scenario outputs

We are starting to consider climate scenario analysis in core decision-making processes, including strategic and financial planning, risk management, capital assessment, business decision making, client engagement, and Group reporting. It helps to inform our strategy and supports how we capture opportunities while minimising risks, and enabling HSBC to navigate through the climate transition.

We use the analysis to anticipate climate-related impacts for our customers by identifying new opportunities where possible, including targeted financing to support their transition journey.

We have considered climate risk in our annual financial planning cycle. In order to do this, we reviewed the inclusion of ECL outcomes from our internal climate scenario analysis using the Current Commitments scenario because we deem it the most likely to transpire over the planning horizon.

Next steps

We plan to continue to enhance our capabilities for climate scenario analysis and use the results for decision making, particularly in respect of:

- our risk appetite, by identifying business-critical metrics and using scenario analysis to test, calibrate, and monitor against thresholds;
- client engagement, by identifying the climate opportunities – such as supporting the growth of renewables, biomass, electric vehicles – and vulnerabilities by engaging with and supporting our customers; and
- strategy, by using the range of scenario analysis outcomes to shape our strategy across business and regions.

Our approach to climate reporting TCFD

Task Force on Climate-related Financial Disclosures ('TCFD')

The table below sets out the 11 TCFD recommendations and summarises where additional information can be found.

We have considered our 'comply or explain' obligation under the UK's Financial Conduct Authority's Listing Rules, and confirm that we have made disclosures consistent with the TCFD Recommendations and Recommended Disclosures, save for certain items, which we summarise below and in the additional information section on page 423.

Recommendation	Response	Disclosure location
Governance		
a) Describe the Board's oversight of climate-related risks and opportunities		
Process, frequency and training	– The Board takes overall responsibility for ESG strategy, overseeing executive management in developing the approach, execution and associated reporting. It has enhanced its oversight of ESG matters, with a dedicated agenda item on this topic introduced for 2022. It considered ESG at seven meetings during the year.	Page 86 and 256
	– Board members receive ESG-related training as part of their induction and ongoing development, and seek out further opportunities to build their skills and experience in this area.	Page 86 and 252
Sub-committee accountability, processes and frequency	– The Group Risk Committee ('GRC') maintains oversight of delivery plans to ensure that the Group develops robust climate risk management capabilities. The GRC also has oversight over ESG-related initiatives and reviews these to assess the risk profile. It considered ESG risk at four meetings in 2022.	Page 272 and 275
	– The Group Audit Committee ('GAC') reviews and challenges ESG and climate-related reporting, processes, systems and controls and considered these matters in detail at five meetings during the year. The GAC, supported by the executive-level ESG Committee and Group Disclosure and Controls Committee, provided close oversight of the disclosure risks in relation to ESG and climate reporting, amid rising stakeholder expectations.	Page 263 and 268
Examples of the Board and relevant Board committees taking climate into account	– The Board considered whether to establish a Board committee dedicated to ESG issues, but instead decided that the best way to support the oversight and delivery of the Group's climate ambition and ESG strategy was to retain governance at Board level.	Page 255 and 256
	– In 2022, the Board oversaw the implementation of ESG strategy through regular dashboard reports and detailed updates including: reviews of net zero policies, financed emissions target setting and climate-aligned financing initiatives.	Page 255
	– The Group Chairman and the Group Chief Executive met regularly with government officials globally to continue to foster strong international relations. In addition, certain Board members also continued to be actively involved in climate initiatives and attend global events such as the Group Chief Executive's attendance at the COP27 Summit in Egypt.	Page 20
b) Describe management's role in assessing and managing climate-related risks and opportunities		
Who manages climate-related risks and opportunities	– The Group Executive Committee enhanced its governance model of ESG matters with the ESG Committee and supporting forums. These support senior management in the delivery of the Group's ESG strategy, key policies and material commitments by providing oversight over – and management and coordination of – ESG commitments and activities.	Page 86 and 255
	– The Group Company Secretary and Chief Governance Officer, and Group Chief Sustainability Officer hold joint responsibility for the ESG Committee. It oversees all areas of environmental, social and governance issues, with support from accountable senior management in relation to their particular areas of responsibilities. Key representatives from the functions and global businesses attend to provide insights on the implementation of the ESG strategy across the Group, allowing the ESG Committee to make recommendations to the Board in respect of ESG matters.	Page 86 and 251
	– The Group Chief Risk and Compliance Officer and the chief risk officers of our PRA-regulated businesses are the senior managers responsible for climate financial risks under the UK Senior Managers Regime.	Page 86
How management reports to the Board	– The Board delegates day-to-day management of the business and implementation of strategy to the Group Chief Executive. The Group Chief Executive is supported in his management of the Group by recommendations and advice from the Group Executive Committee ('GEC'), an executive forum comprising members of senior management that include chief executive officers of the global businesses, regional chief executive officers and functional heads.	Page 248 and 249
	– Key representatives from the functions and global businesses attend the ESG Committee to provide insights on the implementation of the ESG strategy across the Group, allowing the ESG Committee to make recommendations to the Board in respect of ESG matters.	Page 251

Task Force on Climate-related Financial Disclosures ('TCFD') continued

Recommendation	Response	Disclosure location
Processes used to inform management	– The ESG Committee supports Group executives in the development and delivery of ESG strategy, key policies and material commitments by providing oversight, coordination and management of ESG commitments and activities. We also recognise that we require enhanced capabilities and new sources of data.	Page 86 and 251
	– The Climate Risk Oversight Forum oversees all global risk activities relating to climate risk management, including physical and transition risks. Equivalent forums have been established at regional level.	Page 222
	– The Sustainability Target Operating Model Steering Committee oversees the implementation of the Group's organisational plan for the internal infrastructure, both within the Sustainability function and the wider Group, to help deliver our climate ambitions.	Page 86
Strategy		
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term		
Processes used to determine material risks and opportunities	– To support the requirements for assessing the impacts of climate change, we have developed a set of capabilities to execute climate stress testing and scenario analysis. These are used to improve our understanding of our risk exposures for risk management and business decision making. Given the challenges on data sourcing and processes, there has been an impact on certain climate disclosures.	Page 38 and 47
	– Climate scenario analysis was used as a risk assessment tool to provide insights on the long-term effects of transition and physical risks across our corporate and retail banking portfolios, as well as our own operations.	Page 64
	– Our sustainable finance ambition has enabled sustainable infrastructure and energy systems, promoted decarbonisation efforts across the real economy, and enhanced investor capital through sustainable investment.	Page 58
Relevant short, medium, and long term time horizons	– We aim to achieve net zero in our financed emissions by 2050, and in our own operations and supply chain by 2030.	Page 49
	– We aim to provide and facilitate $750bn to $1tn of sustainable finance and investment for our customers in their transition to net zero and a sustainable future.	Page 57
	– We have taken these time horizons into our consideration. Our assessment of climate risks covers three distinct time periods: short term is up to 2025, medium term is 2026 to 2035; and long term is 2036 to 2050.	Page 139
Transition or physical climate-related issues identified	– We enhanced our transition and physical risk questionnaire and scoring tool, which helps us to assess and improve our understanding of the impact of transition and physical risk on our customers' business models, and used it for our corporate clients in high climate transition risk sectors.	Page 222
	– We are supporting our customers in their transition through our sustainable finance and investment ambition. Our sustainable finance data dictionary includes a detailed definition of contributing activities.	Page 58
	– In the UK, in line with our retail portfolio, the main perils that drive potential credit losses relate to coastal, river and surface water flooding, although the impacts from these perils are not expected to cause significant damages. Around 20% of our financed properties are in London, and most are protected by the Thames Barrier.	Page 229
Risks and opportunities by sector and/or geography	– We identified six key sectors where our wholesale credit customers have the highest exposure to climate transition risk, based on their carbon emissions. These are automotive, chemicals, construction and building materials, metals and mining, oil and gas, and power and utilities.	Page 223
	– We continued to improve our identification and assessment of climate risk within our retail mortgage portfolio, with increased investments in physical risk data and enhancements to our internal risk assessment capabilities and models. We completed detailed analysis for the UK, Hong Kong, Singapore and Australia, which together represent 73.8% of balances of the global mortgage portfolio.	Page 224
	– Opportunities include sustainable finance, sustainable investment and sustainable infrastructure. For a detailed breakdown of our sustainable finance progress by geography, see the *ESG Data Pack*.	Page 58
Concentrations of credit exposure to carbon-related assets (supplemental guidance for banks)	– We report our exposure to the six high transition risk sectors in the wholesale portfolio. For details, see the *ESG Data Pack*.	Page 223
	– Since 2020, we have rolled out the questionnaire so that it included our largest customers in the next highest climate transition risk sectors: agriculture, industrials, real estate, and transportation. This was done across a larger geographical scope.	
Climate-related risks (transition and physical) in lending and other financial intermediary business activities (supplemental guidance for banks)	– As a result of our climate scenario analysis, our largest and most impacted sectors – power and utilities, construction and building materials, and chemicals – are subject to increased levels of transition risks due to their ongoing exposure to higher carbon-emitting activities.	Page 227
	– HSBC Asset Management is increasingly considering both physical and transition risks. As a result, it integrated ESG and climate analysis to help ensure that risks faced by companies are considered throughout the investment decision-making process.	Page 64

Task Force on Climate-related Financial Disclosures ('TCFD') continued

Recommendation	Response	Disclosure location
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning		
Impact on strategy, business, and financial planning	– Transition to net zero represents one of our four strategic pillars. We aim to be net zero in our operations and supply chain by 2030 and in our financed emissions by 2050.	Page 49
	– Scenario analysis supports our strategy by assessing our position under a range of climate scenarios. It helps to build our awareness of climate change, plan for the future and meet our growing regulatory requirements. We acknowledge that our systems, processes, controls and governance are developing.	Page 48 and 67
	– We continue to develop how we produce our climate scenario analysis exercises so that we can have a more comprehensive understanding of climate headwinds, risks and opportunities that will support our strategic planning and actions.	Page 67
	– We do not currently fully disclose the impacts of climate-related issues on financial planning, and particularly the impact of climate-related issues on our financial performance and financial position. In addition, we have considered the impact of climate-related issues on our businesses, strategy, and financial planning, but not specifically in relation to acquisitions/divestments. Due to transitional challenges such as process limitations, we do not disclose the climate-related impact in these areas. We expect to further enhance our disclosure and processes in relation to acquisitions/divestments in the medium term.	Page 423
	– We have considered the impact of climate-related issues on our businesses, strategy, and financial planning. Our access to capital may be impacted by reputational concerns as a result of climate action or inaction. In addition, if we are perceived to mislead stakeholders on our business activities or if we fail to achieve our stated net zero ambitions, we could face greenwashing risk resulting in significant reputational damage, impacting our revenue generating ability and potentially our access to capital.	Page 423
Impact on products and services	– We aim to help our customers' transition to net zero and a sustainable future through providing and facilitating between $750bn and $1tn of sustainable finance and investment by 2030.	Page 58
Impact on supply chain and/or value chain	– We will continue to engage with our supply chain through CDP, and through direct discussions with our suppliers on how they can further support our transition to net zero.	Page 62
	– We also have significant responsibilities in relation to asset ownership by our insurance business, employee pension plans and asset management business.	Page 64
Impact on adaptation and mitigation activities	– In October 2020, we announced our ambition to reduce our energy consumption by 50% by 2030, against a 2019 baseline. As part of our ambition to achieve 100% renewable power across our operations by 2030, we continue to look for opportunities to procure green energy in each of our markets. A key challenge remains the limited opportunity to pursue power purchase agreements or green tariffs in key markets due to regulations.	Page 62
Impact on operations	– Climate change poses a physical risk to the buildings that we occupy as an organisation, including our offices, retail branches and data centres.	Page 229
	– We use stress testing to evaluate the potential for impact to our owned or leased premises. Our scenario stress test, conducted in 2022, analysed how seven different climate change-related hazards – comprising coastal inundation, extreme heat, extreme winds, wildfires, riverine flooding, soil movement due to drought, and surface water flooding – could impact 500 of our critical and important buildings.	
Impact on investment in research and development	– Our Climate Solutions Partnership is a five-year $100m philanthropic initiative that aims to identify and remove barriers to scale for climate change solutions. Working with the World Resources Institute, WWF and over 50 local partners, our support focuses on start-up companies developing carbon-cutting technologies, nature-based solutions, renewable energy initiatives in Asia and the WWF-led Asia Sustainable Palm Oil Links programme.	Page 84
How we are striving to meet investor expectations	– During Board meetings, the Directors continued to balance discussions on the Group's performance, emerging risks and duties to shareholders, while remaining conscious of responsibilities to support communities and help customers.	Page 20
	– In 2022, the Board approved an update to the thermal coal phase-out policy. It also approved the publication of an updated energy policy.	Page 23
Transition plan to a low-carbon economy	– We have committed to publish our own climate transition plan in 2023. This plan will outline, in one place, not only our commitments, targets and approach to net zero across the sectors and markets we serve, but how we are transforming our organisation to embed net zero and finance the transition.	Page 49
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario		
Embedding climate into scenario analysis	– Scenario analysis supports our strategy by assessing our position under a range of climate scenarios. It helps to build our awareness of climate change, plan for the future and meet our growing regulatory requirements.	Page 67 and 226
	– In 2022, we delivered our first internal climate scenario analysis exercise where we used four scenarios that were designed to articulate our view of the range of potential outcomes for global climate change. The analysis considered the key regions in which we operate, and assessed the impact on our balance sheet between the 2022 and 2050 time period.	
Key drivers of performance and how these have been taken into account	– Climate scenario analysis allows us to model how different potential climate pathways may affect our customers and portfolios, particularly in respect of credit losses. Under the Current Commitments scenario, we expect moderate levels of losses relating to transition risks. However, the rise in global warming will lead to increasing levels of physical risk losses in later years.	Page 67 and 226

Task Force on Climate-related Financial Disclosures ('TCFD') continued

Recommendation	Response	Disclosure location
Scenarios used and how they factored in government policies	– The scenario assumptions used for our climate stress testing exercise include varying levels of governmental climate policy changes, macroeconomic factors and technological developments. However, these scenarios rely on the development of technologies that are still unproven, such as global hydrogen production to decarbonise aviation and shipping. For details of the assumptions, see the *ESG Data Pack*.	Page 226
How our strategies may change and adapt	– The nature of the scenarios, our developing capabilities, and limitations of the analysis lead to outcomes that are indicative of climate change headwinds, although they are not a direct forecast.	Page 67 and 226
	– Developments in climate science, data, methodology, and scenario analysis techniques will help us shape our approach further. We therefore expect this view of risk to change over time.	Page 226
	– We plan to continue to enhance our capabilities for climate scenario analysis and use the results for decision making, particularly in respect of strategy, by using the range of scenario analysis outcomes to shape our strategy across business and regions.	Page 67
	– We do not currently fully disclose the impacts of transition and physical risk quantitatively, due to transitional challenges including data limitations and evolving science and methodologies.	Page 423
Risk management		
a) Describe the organisation's processes for identifying and assessing climate-related risks		
Traditional banking risk types considered	– Our initial approach to managing climate risk was focused on understanding physical and transition impacts across five priority risk types: wholesale credit risk, retail credit risk, reputational risk, resilience risk and regulatory compliance risk.	Page 221
Process	– We have integrated climate risk into our existing risk taxonomy, and incorporated it within the risk management framework through the policies and controls for the existing risks where appropriate. We also recognise that we require enhanced capabilities and new sources of data.	Page 47 and 221
	– We consider greenwashing to be an important emerging risk that is likely to increase over time, as we look to develop capabilities and products to achieve our net zero commitments, and work with our clients to help them transition to a low-carbon economy. We also recognise that green finance taxonomies are not consistent globally, and evolving taxonomies and practices could result in revisions in our sustainable finance reporting going forward.	Page 47 and 221
	– We also use stress testing and scenario analysis to assess how these climate risks will impact our customers, business and infrastructure.	Page 46
Integration into policies and procedures	– In 2022, we incorporated climate considerations into our UK mortgage origination process for our retail mortgage business and new money request process for our key wholesale businesses. We also continued to enhance our climate risk scoring tool, which will enable us to assess our customers' exposures to climate risk. We also published our updated energy policy, covering the oil and gas, power and utilities, hydrogen, renewables, nuclear and biomass sectors, as well as updated our thermal coal phase-out policy after its initial publication in 2021.	Page 223
	– We are integrating climate risk into the policies, processes and controls across many areas of our organisation, and we will continue to update these as our climate risk management capabilities mature over time.	Page 223
Consider climate-related risks in traditional banking industry risk categories (supplementary guidance for banks)	– In 2022, we expanded our scope to consider climate risk impacts on our other risk types (including treasury risk and traded risk) in our risk taxonomy.	Page 221 and 226
	– We also analysed in our internal scenario analysis exercise how climate risks impact how we manage other risks within our organisation, including credit risk, and on an exploratory basis: market, operational, liquidity, insurance, and pension risks.	Page 67
b) Describe the organisation's processes for managing climate-related risks		
Process and how we make decisions	– The Group Risk Management Meeting and the Group Risk Committee receive regular updates on our climate risk profile, top and emerging climate risks, and progress of our climate risk programme.	Page 222
	– Our climate risk appetite supports the oversight and management of the financial and non-financial risks from climate change, and supports the business to deliver our climate ambition in a safe and sustainable way. We recognise that we require enhanced systems, processes, controls, governance and new sources of data.	Page 47 and 223
c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management framework		
How we have aligned and integrated our approach	– Our climate risk approach is aligned to our Group-wide risk management framework and three lines of defence model, which sets out how we identify, assess, and manage our risks.	Page 221
	– In February 2022, we refreshed a high-level assessment of how climate risk may impact risk types within the HSBC taxonomy over a 12-month horizon, and how the level of risk may increase over longer time horizons.	Page 222
	– We developed our first internal climate scenario exercise, where we used four bespoke scenarios that were designed to articulate our view of the range of potential outcomes for global climate change.	Page 222
How we take into account interconnections between entities and functions	– Through our dedicated climate risk programme, we continued to embed climate considerations throughout the organisation, including updating the scope of our programme to cover all risk types, expanding the scope of climate-related training, developing new climate risk metrics to monitor and manage exposures, and the development of our internal climate scenario exercise.	Page 135
	– We updated our climate risk management approach to cover all risk types in our risk taxonomy.	Page 222
	– We expanded the scope of climate-related training for employees to cover additional topics, such as greenwashing risk, and increased the availability of training to the broader workforce.	Page 222

Task Force on Climate-related Financial Disclosures ('TCFD') continued

Recommendation	Response	Disclosure location
Metrics and targets		
a) Disclose the metrics used by the organisation to assess climate-related risk and opportunities in line with its strategy and risk management process		
Metrics used to assess the impact of climate-related risks on our loan portfolio	– We continue to disclose our wholesale loan exposure to the six high transition risk sectors, which are automotive, chemicals, construction and building materials, metals and mining, oil and gas, and power and utilities. The wholesale loan exposure is used as a metric to assess impact of climate risk and help inform risk management, together with our transition risk questionnaire results. – We continue to measure climate risk in our most material mortgage market, which is the UK, where the primary physical risk facing properties is flooding. We also continue to identify the current and potential EPC ratings for individual properties within the UK mortgage portfolio. For further details, see our *ESG Data Pack*. – Our climate risk management information dashboard includes metrics relating to our key climate risks, and is reported to the Global Climate Risk Oversight Forum. However, we do not fully disclose metrics used to assess the impact of climate-related risks on retail lending, parts of wholesale lending and other financial intermediary business activities.	Page 223 Page 224 Page 423
Metrics used to assess progress against opportunities	– We continue to track our progress against our ambition to provide and facilitate $750bn to $1tn of sustainable finance and investment by 2030, aligned to our published data dictionary. The breakdown of our sustainable finance and investment progress is included in our *ESG Data Pack*. – We do not currently fully disclose the proportion of revenue or proportion of assets, capital deployment or other business activities aligned with climate-related opportunities, including revenue from products and services designed for a low-carbon economy, forward-looking metrics consistent with our business or strategic planning time horizons. In addition, we do not currently disclose internal carbon prices due to transitional challenges such as data challenges. We recognise that we require enhanced systems, processes, controls, governance and new sources of data.	Page 18 and 57 Page 47 and 423
Board or senior management incentives	– To help us achieve our ESG ambitions, a number of measures are included in the annual incentive and long-term incentive scorecards of the Group Chief Executive, Group Chief Financial Officer and Group Executives.	Page 16 and 286
Metrics used to assess the impact of climate risk on lending and financial intermediary business (supplemental guidance for banks)	– As part of our internal climate scenario analysis, we carried out a detailed physical risk assessment of four of our most material retail mortgage markets – the UK, Hong Kong, Singapore and Australia – which represent 73.8% of balances in our retail mortgage portfolio. In 2022, we disclose our loan maturity within the UK mortgage portfolio. – We do not fully disclose metrics used to assess the impact of climate-related risks on retail lending, parts of wholesale lending and other financial intermediary business activities (specifically credit exposure, equity and debt holdings, or trading positions, each broken down by industry, geography, credit quality, average tenor).	Page 224 Page 423
b) Disclose scope 1, scope 2 and, if appropriate, scope 3 greenhouse gas emissions and the related risks		
Our own operations	– We reported our scope 1, 2 and part of scope 3 greenhouse gas emissions resulting from the energy used in our buildings and employees' business travel. In 2022, we started to disclose our scope 3 supply chain emissions.	Page 18 and 63
Greenhouse gas emissions for lending and financial intermediary business (supplemental guidance for banks)	– We expanded our coverage of sectors for on-balance sheet financed emissions. We also set out the data and methodology limitations related to the calculation of scope 3 financed emissions. – In 2022, HSBC Asset Management started to measure scope 1 and 2 emissions of companies in its portfolio. – Future disclosure on financed emissions, and related risks is reliant on our customers publicly disclosing their carbon emissions and related risks. We aim to disclose financed emissions for additional sectors in our *Annual Report and Accounts 2023* and related disclosures.	Page 18 and 50 Page 56 Page 423
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets		
Details of targets set and whether they are absolute or intensity based	– One of our strategic pillars is to support the transition to a net zero global economy. To support our ambition to align our financed emissions to achieve net zero by 2050 or sooner, we have set interim 2030 targets for on-balance sheet financed emissions for eight sectors. – For financed emissions we do not plan to set 2025 targets. We set targets in line with the Net-Zero Banking Alliance ('NZBA') guidelines by setting 2030 targets. In 2022, we disclose interim 2030 targets for on-balance sheet financed emissions for eight sectors. – We do not currently disclose targets used to measure and manage physical risk, or internal carbon price targets. This is due to transitional challenges and data limitations. But we considered physical risk and carbon prices as an input in the climate scenario analysis exercise. We expect to further enhance the disclosure in the medium term as more data becomes available. In addition, we do not currently disclose a target for capital deployment. In 2022, we are internally reviewing and enhancing the green bond framework, with further refinement to be undertaken in 2023. Our continued monitoring of evolving taxonomies and practices over time could result in revisions in our reporting going forward and lead to differences year-on-year as compared with prior years. We do not consider water usage to be a material target for our business and therefore we have not included a target in this year's disclosure.	Page 18 Page 423
Other key performance indicators used	– We also use other indicators to assess our progress including energy consumption and percentage of renewable electricity sourced.	Page 62

Social
Building inclusion and resilience

We aim to play an active role in opening up a world of opportunity for our customers, colleagues and communities as we bring the benefits of connectivity and global economy to more people around the world.

At a glance

Our relationships
Our purpose is opening up a world of opportunity, and we aim to bring that purpose to our customers, colleagues and the communities in which we operate.

Inclusion is key to opening up a world of opportunity. It involves a commitment to remove unnecessary barriers to our people, our customers and our communities in realising their potential. Creating an inclusive environment for our colleagues enables them to flourish, and supports the strong and purposeful delivery of our strategy.

We are committed to ensuring our colleagues – and particularly our leadership – are representative of the communities that we serve, and that we support their well-being and development so they can learn and grow in their careers. We do this because we know that when we build an inclusive, healthy and stimulating workplace for our people, the whole Group succeeds.

We are equally committed to ensuring there are no unnecessary barriers to finance for our customers. Customers should not find it more difficult to access finance because of their gender, their sexual orientation, their neurodiversity or their disability. We have an ambition to create a welcoming, inclusive and accessible banking experience that opens up a world of opportunity for our customers.

Inclusion goes hand-in-hand with resilience. We build resilience for our colleagues by supporting their physical, mental and financial well-being, and by ensuring they are equipped with the skills and knowledge to further their careers during a period of significant economic transformation.

For our customers, we build resilience through education: by helping them to understand their finances and how to manage them effectively, and by creating propositions that simplify the banking experience while helping wealth to grow. We also build resilience through products and services that protect what our customers value – their health, their families, their homes and their belongings.

Building inclusion and resilience can also mean working to address gaps where we think we can make a difference. From working for fair pay and representation for our colleagues, to opening up access to finance to underserved customer groups, to ensuring HSBC branches and offices are safe spaces for everyone, we are committed to fairness and inclusivity.

Finally, we aim to give back by engaging with our communities through philanthropic giving, disaster relief and volunteering. We are focusing these efforts on our priorities: the just transition to net zero and building inclusion and resilience.

We believe building inclusion and resilience helps us to create long-term value and growth. By removing unnecessary barriers and striving to be a fair and equitable bank, we can attract and retain the best talent, support a wider customer base to achieve their goals over the long term, and stimulate growth in our communities. This is how we open up a world of opportunity for our colleagues, our customers and our communities.

In this section

Promoting diversity and fostering inclusion	**Our approach to diversity and inclusion**	We value diversity of thought and we are building an inclusive environment that reflects our customers and communities.	Page 74
	Creating a diverse environment		
	Fostering an inclusive culture		
Building a healthy workplace	**Listening to our colleagues**	We run a Snapshot survey and report insights to our Group Executive Committee and the Board.	Page 77
	Being a great place to work	As the Covid-19 pandemic tested our colleagues, we expect the way we work to change as the workforce meets new demands.	Page 79
	Well-being	Our global well-being programme is a key enabler of our people strategy, especially as we move to a more hybrid way of working.	Page 80
Developing skills, careers and opportunities	**Learning and skills development**	We aim to build a dynamic, inclusive culture where colleagues can develop skills and experiences that help them fulfil their potential.	Page 81
	Energising our colleagues for growth	We are committed to offering colleagues the chance to develop their skills while building pipelines of talented colleagues to support the achievement of our strategic priorities.	Page 82
Building customer inclusion and resilience	**Our approach to customer inclusion and resilience**	We aim to support financial well-being and remove barriers people can face in accessing financial services.	Page 83
Engaging with our communities	**Building a more inclusive world**	We focus on a number of priorities where we can make a difference to the community and support sustainable growth.	Page 84

Promoting diversity and fostering inclusion

Our approach to diversity and inclusion

Our purpose, 'Opening up a world of opportunity', explains why we exist as an organisation and is the foundation of our diversity and inclusion strategy. Promoting diversity and fostering inclusion contributes to our 'energise for growth' priority. By valuing difference, we can make use of the unique expertise, capabilities, breadth and perspectives of our colleagues for the benefit of our customers.

To achieve progress, we are focused on specific Group-wide priorities for which we hold senior executives accountable. Alongside Group targets, some executives have local priorities, such as combating social inequality in the UK, and the promotion of Hispanic representation in the US, to allow flexibility for a broader diversity and inclusion agenda that is contextually relevant.

Our approach extends beyond our colleagues and opens up a world of opportunity to our customers and the communities in which we operate. As we set out on the following pages, we are pleased to report progress in 2022, although we acknowledge there is more work to be done.

How we hold ourselves to account

We set meaningful goals
Our executive Directors and Group Executives have goals within their annual performance scorecards that are tied to remuneration plans. In 2022, we continued to make progress against our three goals to:

- achieve a 35% representation of women in senior leadership roles by 2025;
- achieve a 3.4% representation of Black heritage colleagues in senior leadership roles in the UK and US combined by 2025, aligned to our commitment to double the number of Black colleagues in leadership positions globally; and
- achieve a satisfaction score of at least 75% in our Inclusion index, which looks at the inclusivity of our culture by measuring our colleagues' feelings of belonging, trust and psychological safety, as recorded within our employee Snapshot survey.

We report and track progress
Data is critical and gives our Group Executive Committee regular progress checks against its goals. Our measures to track progress consist of:

- a quarterly inclusion dashboard, which tracks progress against goals with specific data on hiring, promotion and exit ratios;
- a formal assessment of the Group Executive Committee's performance against its three goals, run by our executive compensation team, at the half-year, third quarter and the end of the year, which is then reported to the Group Remuneration Committee; and
- semi-annual inclusion review meetings where our Head of Inclusion meets each Group Executive to review data and their progress against their goals, and to discuss actions and provide recommendations to support further progress.

We benchmark our performance
We use external disclosures and benchmarks to measure the progress we are making, and to provide us with insight into what actions to prioritise. In 2022, we achieved:

- the Parker Review target of having at least one Director from a minority ethnic group on its Board, with three Board members;
- Stonewall's Gold standard and rank as a top global LGBTQ+ inclusion employer;
- a score of 87.2 in the Bloomberg Gender Equality Index, which tracks the performance of public companies committed to transparency in gender data reporting. This was 13.1 percentage points above the financial sector average.

A data driven approach to inclusion
Our approach to collecting ethnicity data through colleagues' self-identification underpins our ethnicity strategy to better reflect the communities we serve. Allowing colleagues to self-identify helps us to set market representation goals. We have enabled 91% of our workforce to be able to share their ethnic heritage with us. A total of 55% of our colleagues have now made disclosures on their ethnic background, where legally permissible.

Strong self-declaration rates in the UK and US have enabled us to develop our ethnicity strategy with market-specific Black heritage representation goals. We define Black heritage to include all colleagues in the UK who identify as Black or mixed race where one of the ethnicities is stated as Black, and in the US for all colleagues who identify as Black or African-American.

Employees can also share their disability, gender identity and sexual orientation data where legally and culturally acceptable to do so. These self-identification options are enabled for 90%, 81% and 70% of our workforce, respectively.

Engaging with diversity at the Board level

We have a designated non-executive Director responsible for workforce engagement, whose role is to bring the voice of the employee into the boardroom. Our employee resource group leadership community is an important contributor and communicator related to workforce engagement. Additionally, non-executive Directors are aligned to each of our employee resource groups.

In 2022, we continued our Bank Director Programme that invites a diverse group of senior leaders from across the Group to gain exposure to boards and develop board skills. This programme is building an internal pool of diverse talent that we will be able to assign to roles with our subsidiary boards.

For further details of Board diversity, see our Corporate governance report on page 247.

Creating a diverse environment

Women in senior leadership
After achieving our ambition of having 30% of senior leadership positions held by women in 2020, we set a new goal to reach 35% by 2025. We remain on track, with 33.3% of senior leadership roles held by women at the end of 2022, an increase of 1.6 percentage points since 2021. A total 35.7% of all external appointments into senior positions were female, down from 37.8% in 2021, and 38.1% of all promotions into senior leadership roles were female.

Talent programmes, including Accelerating Female Leaders, helped increase the visibility, sponsorship and network of our high-performing senior women. Since starting the programme in 2017, 38% of participants have either been promoted or taken a lateral move to develop their careers. We have also retained 87% of colleagues who have completed the programme.

In our Accelerating into Leadership programme, which prepares high potential, mid-level colleagues for future leadership roles, 44% of participants in 2022 were women.

We also had more than 2,600 women participating in our Coaching Circles programme, which involves senior leaders advising and supporting colleagues to develop their leadership skills and build their networks.

Our succession planning for key leadership roles includes an assessment of the diversity of our succession plans. We are improving the gender diversity of those in roles deemed most critical to the organisation, and successors to those roles. In 2022, 36% of the succession pool for these roles were women.

In our support of our people throughout the different stages of their lives and careers, and in our aim to enable equal participation at work, we introduced gender neutral parental leave in the US and Australia, and improved paid maternity and paternity leave in Mexico and Argentina.

Black colleagues in senior leadership
We are on track to double the number of Black colleagues in senior leadership roles globally by 2025, having increased the number of Black senior leaders by 37% since 2020.

During 2022 we set a new Group-wide ethnicity strategy with the principle of better reflecting the communities we serve. We test this principle by comparing our workforce to national census data and setting goals to narrow material representation gaps over time. Our analysis highlighted Black heritage representation gaps in the UK and the US. We therefore set a goal of having 3.4% of Black heritage colleagues in senior leadership roles in the UK and US combined by 2025. While we are on track to meet this, with 2.5% of leadership roles held by Black heritage colleagues in 2022, we know there is more to be done to be representative of the societies we serve.

Our ethnicity strategy is overseen by a committee of senior leaders, led by our Group Chief Risk and Compliance Officer. The committee provides strategic direction to the Global Ethnicity Inclusion Programme.

In 2022, we continued to focus on inclusive hiring, investing in talent and growing leadership effectiveness. We have launched programmes to provide sponsorship and mentoring such as Solaris in the UK, which supports talented Black female colleagues, and a Black heritage programme in Global Banking and Markets, where 25% of participants at Director level secured promotion within 12 months of commencing the programme. In 2023, we will extend the programme to Commercial Banking colleagues and to colleagues in the US, with an additional focus on Hispanic colleagues. To help us attract diverse talent, we partner with specialist recruitment organisations that engage ethnically diverse talent. We also introduced reverse mentoring, which pairs Group Executives with Black heritage colleagues.

Gender diversity data

Holdings Board	8	67%
	4	33%
Group Executives	17	81%
	4	19%
Combined Group Executives and direct reports[1]	170	66%
	89	34%
Subsidiary directors[2]	616	66%
	315	34%
Senior leadership[3]	6,226	67%
	3,103	33%
Middle management[3]	18,897	63%
	11,257	37%
Junior management[3]	53,363	51%
	51,541	49%
All employees	107,863	48%
	115,907	52%

Male Female

1 Combined Group Executives and direct reports includes HSBC Group Executives and their direct reports (excluding administrative staff) as at 31 December 2022.
2 Directors (or equivalent) of subsidiary companies that are included in the Group's consolidated financial statements, excluding corporate directors.
3 In our leadership structure, we classify: senior leadership as those at career band 3 and above; middle management as those at global career band 4; and junior management as those at global career bands 5 and 6.

Representation and pay gaps
We have reported gender representation and pay gap data since 2017 for the UK, and extended this to include gender data for the UK, the US, mainland China, Hong Kong, India and Mexico, alongside ethnicity data for the UK and US. In 2022, we extended this to include gender data for Singapore and the UAE. This covers over 70% of our workforce.

In 2022, our mean aggregate UK-wide gender pay gap was 45.2%, compared with 44.9% in 2021, and the ethnicity pay gap was 0.4%, compared with -0.8% in 2021. Our UK gender pay gap is driven by the shape of our workforce. There are more men than women in senior, higher-paid roles and more women than men in junior roles. Given differences in variable pay levels across these roles, the increase in the 2021 variable pay pool contributed to the slight widening of our pay gap for 2022.

While we are confident in our approach to pay equity, until women and ethnically diverse colleagues are proportionately represented across all areas and levels of the organisation we will continue to see gaps in average pay. We are committed to paying colleagues fairly regardless of their gender or ethnic heritage and have processes to ensure that remuneration is free from bias. We review our pay practices and undertake a pay equity review annually, including an independent third-party review of equal pay in major markets. If pay differences are identified that are not due to objective, tangible reasons such as performance, skills or experience, we make adjustments.

For further details on our representation data, pay gap data, and actions, see www.hsbc.com/diversitycommitments and the *ESG Data Pack* at www.hsbc.com/esg.

Fostering an inclusive culture

In our annual Snapshot survey's Inclusion index, which measures our colleagues' sense of belonging, psychological safety, perception of fairness and trust, we achieved a favourability score of 76% in 2022, one point higher than our goal, and four points above the financial services industry benchmark.

There was a three-point increase in colleagues feeling able to speak up without fear of negative consequences. This was a positive indicator of our strengthening culture of inclusion, which is a critical component of our 'energise for growth' strategy.

To educate our leaders and colleagues on driving an inclusive culture, we provided a number of inclusive leadership training programmes, and enhanced our 'Making HSBC more inclusive' training. More than 10,500 colleagues also completed inclusive hiring training, which is aimed at enabling fair and inclusive hiring decisions that are in line with our hiring principles.

Employee resource groups
Our employee resource groups foster an inclusive culture, and contribute significant value to tens of thousands of colleagues, with networks focused on a range of issues, including: age, disability, parents and careers, ethnicity, gender and LGBTQ+.

Our employee resource groups celebrate key dates in the diversity calendar and hold events for colleagues to raise awareness, and build empathy and allyship. These included Pride, our network for LGBTQ+ colleagues and allies, holding a global '24 hours of Pride' campaign that engaged our workforce to collectively celebrate our LGBTQ+ colleagues. Our Embrace network for ethnicity hosted its first global summit, attended by over 1,300 colleagues, including senior leaders across three regions.

Looking to the future on disability
Our ambition is to become a leading disability confident employer and a digitally accessible financial services provider. In 2022, we continued to focus on driving our digital accessibility programme so that our products and service can be accessible for all.

For our customers and colleagues, we improved the accessibility of our public websites, mobile applications and internal systems. AbilityNet, the digital accessibility charity, benchmarked HSBC as having the most accessible website compared with other local competitor banks in 10 of 13 of our key Wealth and Personal Banking markets.

We are transforming our internal systems to be digitally accessible. In 2022, we engaged over 2,000 colleagues in digital accessibility awareness and training, supported by the launch of a digital accessibility hub, which provides training and knowledge resources. The hub achieved the best digital accessibility award at the 2022 Digital Impact Awards.

We are looking to extend our UK workplace adjustments process to other key markets, ensuring our colleagues have the right tools and technologies to perform their roles. The programme will help colleagues with a physical or sensory disability, long-term mental health conditions or neurodiversity needs to get advice and request additional equipment or software to enable them to do their work.

In 2022, HSBC UK was recognised as a Gold Standard employer, following an assessment by the Business Disability Forum, with a score of 95.8%, the highest score awarded. We were praised on our commitment, drive and innovation with regards to disability inclusion. In 2023, we will continue to progress the execution of our disability confidence strategy with a particular focus on improving the experiences of colleagues with a disability across the key stages of their career journeys.

Empowering diverse customers
Aligned to our purpose of opening up a world of opportunity, we are committed to identifying and removing the different barriers customers face in accessing financial services. In 2022, we contributed to this through several initiatives, including the launch of a $1bn lending fund to invest in female-owned businesses. We introduced new processes to support refugees fleeing the conflict in Ukraine so they can access the financial services they need to set up a new life in the UK. We also sponsor the Hong Kong Lutheran Social Service to develop the 'Health dollar fun' app to boost digital literacy among the elderly.

For further details of how we are making financial services more accessible and fair, see 'Our approach to customer inclusion and resilience' on page 83.

Creating more equal communities
We partner with external organisations to open up opportunities for those groups who have historically been disadvantaged. In 2022, initiatives included:

- working with the Indian Academy for Self-Employed Women to provide business training and support to access digital marketplaces;
- partnering with Rural Education and Development India to train 500 youths from migrant and rural families to equip them with skills for the healthcare and apparel sector; and
- supporting the National Council of Social Service in Singapore to support employability services for persons who have recovered from mental health issues.

Starting our journey on social mobility

We believe in the principle that the circumstances of someone's birth should not define their future.

In 2022, we began to collect the socio-economic diversity data of our colleagues within the UK, with the aim to improve social mobility. We will use this data to help us understand the representation and progression of colleagues from lower socio-economic backgrounds.

We also joined ProgressTogether, a membership body of firms aimed at addressing career progression and retention for those identifying with a lower socio-economic background. We established our 'Strive' employee resource group, which will support and advocate for colleagues from lower socio-economic backgrounds. We plan to expand Strive to other markets as our work matures.

Building a healthy workplace

Listening to our colleagues

We were founded on the strength of different experiences, attributes and voices. We believe that seeking out and listening to the views of our colleagues is a fundamental part of who we are and how we work. This has been especially important in 2022, as we looked to continue defining the future of work and driving change in how we work.

Listening to colleague sentiment
In 2022, we changed how we run our all-employee Snapshot survey, reducing the frequency from once every six months to once a year, with a focus on increasing participation to enable more granular reporting throughout the organisation. We received a record 167,668 responses to the survey in September, with 78% of employees participating, surpassing the previous year's record of 64%.

This increase has enabled us to put more data directly in the hands of our people managers to understand how their teams feel about life at HSBC, with 5,000 managers given access to results, discussion guides and learning resources to help them engage with the feedback at a team level. We continue to report insights to our Group Executive Committee and the Board, and local results are shared across the Group to provide senior leaders across business areas with detailed insight to help plan and make decisions.

We complement this all-colleague survey with targeted listening activities throughout the year, with employee lifecycle surveys aimed at new joiners, internal movers and voluntary leavers.

In May and June, we received more than 13,000 responses to our 'Future of work' survey, which explored how colleagues feel towards hybrid working. For further details of the findings and our approach to hybrid working, see 'Being a great place to work' on page 79.

In 2022, we also held a global 'employee jam', where over 18,000 colleagues across 63 markets came together for a live online conversation (see panel below). The Snapshot survey is also a key source of insight to inform our approaches to well-being. For further details of our approach to well-being, see page 80.

Employee conduct and harassment
We expect our people to treat each other with dignity and respect, and do not tolerate bullying or harassment on any grounds. Over the past few years, we have strengthened our approach to bullying and harassment, improving our collective understanding of, and response to, these issues.

Our global anti-bullying and harassment code helps us to maintain consistent high standards of conduct across the Group, while accommodating local cultural requirements. In 2022, we added further anti-bullying and harassment messages to our mandatory training for all our colleagues, and continued our campaign to encourage colleagues to be 'active bystanders' and speak up when they see or experience poor behaviours or things that do not seem right.

We have mandatory local procedures for handling employee concerns, including complaints of bullying and harassment. Where investigations are required, we have a global framework setting the standards for those investigations, which we improved throughout 2022. We monitor bullying and harassment cases to inform our response and the data is reported to management committees.

In 2022, 1,159 concerns were raised related to bullying, harassment, discrimination and retaliation. Of the 811 cases where an investigation has concluded, 47% were substantiated. We take action where we see standards fall short of our expectation. In 2022, 591 colleagues were dismissed in relation to misconduct, including 27 as a result of bullying, harassment or discrimination. We are not complacent and know that there is more we can do. Our refreshed values will guide and inform our plans to continue creating and promoting an inclusive working environment

Employee engagement

73%

Employee engagement score
(2021: 72%)

68%

Of colleagues feel able to achieve their career objectives at this company
(2021: 67%)

77%

Of colleagues who feel confident about this company's future
(2021: 74%)

Holding a live global online conversation

In April, we held a global 'employee jam', where over 18,000 colleagues came together digitally for a live conversation around three key themes: embedding our purpose, values and strategy; enhancing the colleague experience; and enhancing the customer experience.

Mirroring what we have heard in Snapshot surveys, colleagues told us that they believe in our purpose, strategy and values, but want to have a better understanding of their tangible impacts – both inside and outside HSBC – as well as their direct role in driving these.

Colleagues said that we have made progress in areas such as diversity, future skills and trust, but that the focus should now be placed on building a culture of inclusion and empowerment, and on a more consistent approach to well-being. They also said the Group should focus on simplifying internal processes.

Listening to our colleagues continued

Employee engagement
We use eight Snapshot indices to measure key areas of focus and compare against peer institutions, including a new index focused on inclusion that we introduced in 2022. The table below sets out how we performed.

Index	Score[1]	vs 2021	HSBC vs benchmark[2]	Questions that make up the index
Employee engagement	**73%**	**+1**	**+3**	I am proud to say I work for this company. I feel valued at this company. I would recommend this company as a great place to work.
Employee focus	**72%**	**+1**	**+2**	I generally look forward to going to work. My work gives me a feeling of personal accomplishment. My work is challenging and interesting.
Strategy	**75%**	**+3**	**+4**	I have a clear understanding of this company's strategic objectives. I am seeing the positive impact of our strategy. I feel confident about this company's future.
Change leadership	**76%**	**+2**	**+2**	Leaders in my area set a positive example. My line manager does a good job of communicating reasons behind important changes that are made. Senior leaders in my area communicate openly and honestly about changes to the business.
Speak-up	**76%**	**+1**	**+8**	My company is genuine in its commitment to encourage colleagues to speak up. I feel able to speak up when I see behaviour which I consider to be wrong. Where I work, people can state their opinion without the fear of negative consequences.
Trust	**77%**	**+1**	**+3**	I trust my direct manager. I trust senior leadership in my area. Where I work, people are treated fairly.
Career	**68%**	**+1**	**+4**	I feel able to achieve my career objectives at this company. I believe that we have fair processes for moving/promoting people into new roles. My line manager actively supports my career development.
Inclusion (new)[3]	**76%**	**+1**	**+4**	I feel a genuine sense of belonging to my team. I feel able to achieve my career objectives at this company. I feel able to be myself at work. I trust my direct manager. Where I work, people are treated fairly. Where I work, people can state their opinion without the fear of negative consequences.

1 Each index comprises constituent questions, with the average of these questions forming the index score.
2 We benchmark Snapshot results against a peer group of global financial services institutions, provided by our research partner, Karian and Box. Scores for each question are calculated as the percentage of employees who agree to each statement. For further details on the constituent questions and past results, see the *ESG Data Pack* at www.hsbc.com/esg.
3 The Inclusion index was introduced in 2022. It comprises questions that were asked in earlier surveys, so we are able to report a comparison with 2021.

For further details of well-being, see page 80, and for further details of inclusion, see page 76.

What we learned
All eight of our Snapshot indices improved slightly in 2022. Employee engagement, which is our headline measure, was three points above benchmark and one point above 2021 levels, and exceeded our target to maintain engagement levels during the year. The Strategy index continued to improve in relation to the financial services' benchmark.

Our colleagues continued to cite our approach to hybrid and flexible working as a reason to recommend HSBC, a theme that has been consistent since 2020. A greater proportion of colleagues also said they experienced a positive environment and culture, as well as saw training and progression opportunities, helping to drive our Employee engagement score.

One of the other top five factors identified to influence the Employee engagement score is colleagues' confidence in the company's future. Within the Strategy index, employees recorded feeling increasingly confident about the future of the company and understanding of our strategic objectives.

With inflationary pressures and the rising cost of living around the world, pay and financial well-being are growing concerns among colleagues. We saw an increase in comments relating to pay in the Snapshot survey, and self-reported financial well-being declined by four points, despite a four-point increase in employees reporting that they know how to get support about their financial capability. For further details of our approach to financial well-being, see page 80.

Our Snapshot survey showed 65% of colleagues reported they intend to stay with HSBC for five or more years, a one-point increase, while 19% said they intend to leave in the next two years, a two-point decrease. Despite this, involuntary turnover decreased to 3.3% and voluntary turnover increased to 14.1%, as labour markets picked up globally. Both our Snapshot and voluntary leaver surveys tell us that career development and pay and benefits continue to be key influencing factors for voluntary attrition, and they remain central to our people strategy. For further details of how we help our people develop their careers, see 'Developing skills, careers and opportunities' on page 81.

Being a great place to work

We continued to support our colleagues during the Covid-19 pandemic, and ensured their safe return to the office. In 2022, we made it a priority to support even more colleagues to work flexibly, while ensuring we are there for our customers when and where they need us.

Hybrid working is a key part of our flexible working proposition and requires trust. We have empowered our people to find the right balance, guided by the three principles of:

- customer focus, by delivering excellent outcomes for our customers;
- team commitment, by connecting with each other, building our community and collaborating; and
- two-way flexibility, by providing more choice on how, when and where we work, suitable for the roles we perform.

Our flexible working approach
Colleagues consistently tell us that our approach to flexible and hybrid working is a key reason to recommend HSBC as an employer. In June 2022, our 'Future of work' survey showed 81% of colleagues speak positively about our approach to flexible and hybrid working, and 80% feel it improves their work-life balance.

In 2022, we refreshed our flexible working policies to provide more choice and make it easier to request a flexible working arrangement. Choices include flexible and staggered hours, job sharing, reduced hours and hybrid working. These new policies are available to more than 90% of colleagues, including our branch network and non-permanent employees. We have encouraged teams to have open conversations about flexible working opportunities.

More colleagues than ever are working in a hybrid way, where working time is split between the office and home or another location. According to our Snapshot survey in September, 59% of our colleagues work in a hybrid way, compared with 37% in 2021.

Different markets are at different stages of embedding hybrid working, and in 2022 some continued to operate under Covid-19 conditions.

Getting the balance right
While working at home eliminates commuting time and provides more opportunities to balance work and life, some benefits of being together in person cannot be recreated remotely.

Overall, we have seen that colleagues in hybrid roles feel more productive and engaged than those who are unable to work remotely. However, nearly half of our colleagues told us that the networks of people they regularly interacted with decreased during the pandemic, and they missed social connections.

As a result, we have equipped leaders to achieve the right balance of remote and in-person working for their teams. Our people managers have access to in-person and on-demand learning to develop the skills needed to lead hybrid teams effectively. Nearly 8,000 hybrid working learning curriculums were completed by our people leaders in 2022. In addition, we ran targeted events to stimulate a successful return to the office and create new hybrid working habits.

With more colleagues adopting balanced hybrid working patterns, the Snapshot survey showed 77% of colleagues said they have enough opportunities to connect and collaborate with people outside their immediate teams.

Our offices will continue to evolve to support increased collaboration. We are rolling out a digital app in several locations that will offer greater visibility of who is in the office to support teams coming together.

86%

Of people managers are confident their teams have the right balance of remote and in-person working to meet customer and stakeholder needs.

Our approach to fair pay and performance

As part of our approach to performance management, we ask colleagues to set goals with the support of their line managers, which are regularly reviewed. We encourage people managers to hold regular performance and development conversations, incorporating feedback, and discussing well-being and progress. In the Snapshot survey, 76% of colleagues indicated they were happy with the support their manager provided for career development.

While our overall Career index, which measures employee sentiment towards career development, improved by one point, results from our employee listening channels indicated that sentiment around pay and career opportunities were key factors in colleagues' decisions to leave HSBC. In 2023, we will review our approach to pay and performance to ensure we are able to motivate colleagues in a way that is authentic to our culture and values. Our approach will help colleagues have clarity on performance expectations, awareness of development opportunities and access to resources.

As part of this programme, we are proposing to simplify assessments of colleagues and shift the focus to conversations about performance and growth, while improving transparency and structure in our fixed and variable pay design.

For further details of our approach to colleague remuneration see page 281, and for details of our average standard entry level wages compared with local minimum wage, see our *ESG Data Pack* at www.hsbc.com/esg.

Greater front-line flexibility with far reaching benefits

Colleagues have embraced hybrid working across our eight global service centres that support our customer operations and services. Through a 'Hello hybrid' campaign, over 38,000 employees completed hybrid skills e-learning and nearly 850 colleagues took part in team dialogue sessions. The campaign helped our colleagues identify the best of remote and office working for their differing customer needs, cultures and regulatory requirements. As a result of the campaign, employee sentiment improved by 6% for the question 'I generally look forward to my work day.' In our main contact centres, colleagues now spend up to 67% of their working time on customer-facing activities.

Well-being

We want our colleagues to be at their best at work, so we invest significantly in their well-being and will continue to seek new ways to provide support. Guided by data and colleague feedback, the pillars of our well-being programme are mental, physical, financial and social well-being. In our employee Snapshot survey carried out in September, 70% of our colleagues said they believe HSBC cares about their well-being.

Mental well-being
Supporting our colleagues' mental health remains a top priority, with the Covid-19 pandemic still presenting mental health challenges in many countries. Our Snapshot survey revealed an increase in mental well-being, with 84% of colleagues rating their mental health as positive, compared with 82% in 2021. It also revealed that 73% of colleagues felt comfortable talking to their manager about their mental health, a slight increase from 72% in 2021.

We have continued to make telephone counselling services and Headspace, a meditation app, available to all colleagues globally. Use of these services increased by 3% and 28% in 2022, respectively.

More than 240,000 colleagues and contractors took part in mental health awareness training as part of global mandatory training. Our voluntary mental health e-learning has now been completed by 30,000 employees, with people managers making up 17% of the completions. We also provide an in-depth classroom course designed for line managers and those wanting to be mental health champions, which has been completed by 800 colleagues.

To celebrate World Mental Health Day, we ran a global awareness campaign on alleviating stigma and encouraging colleagues to feel able to speak up if they need help. Throughout October, we held over 100 virtual events, featuring internal and external experts providing advice on mental health and well-being related topics.

Physical well-being
The Snapshot survey revealed a decrease in physical well-being, with 71% of colleagues rating their physical health as positive, compared with 75% in 2021.

In February, we ran a survey about our employee benefits, which showed 37% of colleagues wanted more support with physical activity and exercise. In response, we ran a five-month pilot with 2,000 colleagues to test mobile apps that incentivise physical activity. The pilot showed that the use of apps and community challenges helped up to 70% of users increase their physical activity, to varying degrees. As a result, we are looking at expanding the initiative to more countries in 2023.

We have continued to provide access to private medical insurance in the majority of our countries and territories, covering 98% of permanent employees. In certain countries we provide on-site medical centres that the majority of colleagues can access.

We have enhanced fertility, adoption, and surrogacy benefits for our colleagues in the US and Canada. We are also expanding our gender dysphoria benefits for LGBTQ+ colleagues in the UK and Philippines from 2023.

Financial well-being
Our Snapshot survey revealed a decrease in financial well-being, with 60% of colleagues reporting positively, compared with 64% in 2021. We believe this is an impact of rising inflation and cost of living in many countries.

However, colleagues felt more supported to manage their financial well-being, at 62%, an increase of four points from 2021. The same survey revealed that 81% of colleagues felt they had the right skills and knowledge to manage their day-to-day finances, and 77% said they are well prepared to meet their financial goals.

Our benefits survey showed that 31% of colleagues want more support around financial education. In response, we have continued to promote our financial education programmes on healthy financial habits and saving strategies. Since their launch, over 2,400 colleagues have used these programmes.

We review our approach to employee share ownership plans in line with country demand, operational capacity and local legislation. In 2022, we expanded our global share plan to colleagues in Bahrain, Qatar and Kuwait, meaning that 90% of our people globally now have access to share ownership plans. We continue to look to offer the plan in new locations.

In the UK, we introduced a green car scheme to encourage colleagues to transition to electric vehicles and benefit from reduced running costs and CO_2 emissions.

Social well-being
We introduced social well-being as a new pillar of our programme in 2022, to focus on social connections and work-life balance.

Snapshot surveys showed 75% of colleagues say they can integrate their work and personal life positively, a slight decrease compared with 76% in 2021. We will continue to facilitate this by enabling flexible working arrangements, including hybrid working, in line with our future of work initiative (see page 76). Colleagues feel more confident talking to their manager about work-life balance, with 80% saying they do, compared with 77% in 2021.

In 2021, we upgraded our At Our Best recognition online platform, which allows for real-time recognition and appreciation between colleagues. The upgrade enables colleagues to record and send video messages to accompany recognitions. In 2022, there were more than 1.2 million recognitions made, an 11% increase on 2021. We also enabled colleagues globally to donate their points directly to humanitarian relief agencies supporting those impacted by the war in Ukraine. To date more than 1,100 colleagues have made personal donations to this cause.

Awards
CCLA Global 100 Mental Health Benchmark
– Ranked #1 global employer

Promoting a culture of well-being

In July 2022, we became a founding member of the World Wellbeing Movement, a coalition of global leaders from business, civil society and academia. A key objective of the movement is to develop a simple and universally acceptable standard for measuring well-being that leads to meaningful action. We believe that having a standard ESG indicator on well-being will improve transparency and enable organisations to better target actions to create positive change.

Developing skills, careers and opportunities

Learning and skills development

We aim to build a dynamic environment where our colleagues can develop skills and undertake experiences that help them fulfil their potential. Our approach helps us to meet our strategic priorities and support our colleagues' career goals.

Our resources
The way we work and the way we learn has changed, driven by the adoption of hybrid working styles and digital capabilities. We use a range of resources to help colleagues take ownership of their development and career, including:

- HSBC University, which is our home for learning and skills accessed online and through a network of training centres. Learning is organised through technical academies aligned to businesses and functions, complemented with enterprise-wide academies on topics of strategic importance;
- My HSBC Career Portal, which offers career development information and resources to help colleagues manage the various stages of their career, from joining through to career progression; and
- HSBC Talent Marketplace, which is our online platform that uses artificial intelligence ('AI') to match colleagues interested in developing specific skills with opportunities that exist throughout our global network.

Learning foundations
We expect all colleagues, regardless of their contract type, to complete global mandatory training each year. This training plays a critical role in shaping our culture, ensuring a focus on the issues that are fundamental to our work – such as sustainability, financial crime risk, and our intolerance of bullying and harassment. New joiners attend our Global Discovery programme, which is designed to build their knowledge of the organisation and engage them with our purpose, values and strategy.

As the risks and opportunities our business faces change, our technical academies adapt to offer general and targeted development. Our Risk Academy provides learning for every employee in traditional areas of risk management such as financial crime risk, but also offers more specific development for those in high-risk roles and for emerging issues, such as climate risk, or the ethics and conduct of AI and big data.

Preparing for the future
Our approach to learning is skills based. Our academy teams work with businesses and functions to identify the key skills and capabilities they need now, and in the future.

We use people analytics, strategic workforce planning, and learning needs analysis to identify current and future skills demand, and to help colleagues develop in new areas that match their aspirations and support career growth.

Throughout 2022 we continued to run skills campaigns to create the impetus for individual-led learning, and have used our skills influencer network of more than 1,800 colleagues to build engagement and enthusiasm around the Talent Marketplace, and opportunities for development.

Evolving how we learn
During the Covid-19 pandemic, we strengthened our digital offering to enable colleagues to develop their skills in a hybrid environment. Our colleagues can access HSBC University online via our Degreed learning platform, using it to identify, assess and develop skills through internal and external courses and resources in a way which suits them.

Degreed materials range from short videos, articles or podcasts to packaged programmes or curated learning pathways that link content in a logical structure. By December, more than 187,000 colleagues were registered on the platform. In 2022, overall training volumes were 28.8 hours per FTE, up from 26.7 hours per FTE in 2021.

However, we recognise that most development happens while our colleagues work, through regular coaching, feedback and performance management. To enable even more opportunities for colleagues to grow in this way, our Talent Marketplace matches colleagues to projects and new experiences based on their aspirations and career goals. In 2022, we rolled the platform out to an additional 83,000 colleagues across 18 countries and territories. Over 150,000 colleagues now have access to the platform, and to date over 3,000 projects and networking requests have been facilitated, and over 70,000 hours of activity have taken place.

Training at HSBC

6.3 million

Training hours carried out by our colleagues in 2022.
(2021: 5.9 million)

28.8 hours

Training hours carried out per FTE in 2022.
(2021: 26.7 hours)

Identifying and retaining future talent

The starting point to identifying talent is having a fair and inclusive recruitment process. To help managers hire in line with our principles, we have launched compulsory inclusive hiring training. In 2022, over 5,000 managers received the certification, in addition to 13,500 in 2021.

Our talent programmes have been designed to enable talented employees to make the successful transition into more complex roles and to support participants in planning for a long-term career at HSBC. Our key programmes include:

- Accelerating Female Leaders, which increases the visibility, sponsorship and network of female participants. Colleagues are supported with development plans to help them prepare for the next level of leadership, and matched with sponsors from our senior leadership and external executive coaches;
- Accelerating into Leadership, which prepares participants for leadership roles through peer-based development activities, senior sponsorship and executive coaches. Topics of focus include network building, developing resilience and navigating the organisation. We measure the retention of colleagues post-programme to assess the success; and
- 'UGrow', which is our programme that supports the retention and development of colleagues while strengthening our leadership pipeline. The programme offers masterclasses focused on career planning, driving results and adaptability for aspiring colleagues.

Our global emerging talent programmes welcomed over 800 graduates and 600 interns to the organisation in 2022. Our programmes are a key enabler of our broader diversity goals (see page 74). In 2022, our graduate intake was 48% female, and comprised graduates from 46 nationalities and over 30 ethnicities. We welcomed our graduates with a three-day induction programme, which introduced them to key topics such as our purpose, values and strategy, as well as our role in delivering a sustainable future.

Energising our colleagues for growth

We are committed to offering colleagues the chance to develop their skills while building pipelines of talented colleagues to support the achievement of our strategic priorities.

It remains critical to our ability to energise for growth that we demonstrate the right leadership, and create the optimal conditions for our people to perform. Our leadership and culture is guided by our purpose, values and delivering our strategy.

The Sustainability Academy
To support our ambitions to become net zero in our own operations by 2030, and to align our financed emissions to the Paris Agreement goal of net zero by 2050, we launched the Sustainability Academy in 2022. The academy is available to all colleagues across the Group and serves as a central point for colleagues to access learning plans and resources, and develop practical skills.

The academy has resources to help all colleagues understand broad topics such as climate change or biodiversity, and is supplemented with more advanced content for key groups of colleagues who are supporting customers through their transition. We intend to align content to support business outcomes by educating our colleagues on topics such as energy efficiency, renewable energy, sustainability and ESG reporting.

As part of our strategy to align the provision of finance to the Paris Agreement, the Sustainability Academy is supporting our colleagues to build their knowledge and capability in the sectors in which we have begun to measure and set financed emissions targets, including the oil and gas, and power and utilities sectors.

We will continue to update the academy with new research and content related to ESG issues, including those related to social and governance issues.

Supporting our Asia wealth strategy
At the heart of our ambition to offer best-in class international wealth management services to our customers is the accelerated expansion of our offering in Asia. To achieve this, we are providing opportunities for our colleagues to reskill and build career resilience through our Accelerating Wealth Programme. The programme offers a skills-based development plan for colleagues who are looking to pursue a career in wealth management. Participants on the programme are allocated 20% of their working week to focus on learning and skills development. They are then regularly assessed to ensure they are making progress with developing the right skills to meet our client needs.

We recognise the role that diverse experiences can bring to our customers, and have therefore ensured that the programme is open to colleagues from all global businesses and functions based in Asia.

Building leadership capabilities
We have strengthened the training we give to leaders at all levels of the Group to ensure they are equipped with the skills and knowledge to energise and develop our colleagues.

We have continued the executive leadership programme for our most senior leaders, creating a programme of high-quality modules that draws on internal and external expertise. The programme focuses on the shifting expectations of leaders, embedding the clarity and alignment to achieve our goals and tackling strategic change. We complemented this with educational resources focused on the opportunities presented by Cloud, artificial intelligence, and blockchain technology.

Our Country Leadership Programme aims to prepare and develop future country CEOs and executives for highly complex roles. The programme builds the confidence and competence of leaders across themes such as managing cyber risk, building regulatory relationships, representing HSBC's net zero ambitions and upholding customer-centricity. Participants learn through simulation exercises and coaching from seasoned executives, subject matter experts and Board members.

Leadership development for our colleagues at managing director level includes new programmes that have been created in partnership with business schools and industry practitioners. Topics focus on a range of issues, including critical skills areas such as influence, inclusion, and Agile methodologies.

We recognise the importance of people managers in shaping the experience of our colleagues. We have revised our training for people managers to better support living our purpose, values and strategy, and to reflect the challenges of retaining talent. Our core leadership development programme is made up of four modules that are available in face-to-face and virtual formats. The programme is focused on the role and expectations of managers, how to design and organise work, how to handle relationships with employees and how to nurture a productive team environment.

Supporting UK emerging talent

In the UK, we have continued to broaden our emerging talent programmes beyond traditional graduate and internship schemes. Our programmes support those from non-traditional education backgrounds, and are supportive of our social mobility ambitions, outlined on page 75. In 2022, we provided over 180 apprenticeship opportunities for external and internal applicants. We have also provided over 600 structured work placements for secondary school students, and developed partnerships with Brampton Manor, Generating Genius and the #merky foundation to provide financial literacy support to over 6,400 14 to 16 year olds. We have recently launched a career accelerator programme, in partnership with Zero Gravity, which involves over 120 of our graduates providing career coaching and mentorship to university students. HSBC UK also uses its apprenticeship levy to support work opportunities at small and medium-sized business through a partnership with West Midlands Combined Authority.

Building customer inclusion and resilience

Our approach to customer inclusion and resilience

We believe that financial services, when accessible and fair, can reduce inequality and help more people access opportunities. We aim to play an active role in opening up a world of opportunity for individuals by supporting their financial well-being, and removing the different barriers that people can face in accessing financial services.

Access to products and services
We aim to provide innovative solutions that address the barriers people can face in accessing products and services. In 2022, we introduced a new process to help refugees fleeing the conflict in Ukraine to access the financial services they need to set up a new life in the UK. Over 9,000 Ukrainian refugees have now opened a bank account with us.

As part of our efforts to help vulnerable customers access digital services, since 2021, HSBC UK has given over 1,500 vulnerable customers a free tablet device. This allows customers who previously had no way of accessing our online or mobile banking services the ability to do so.

Making banking accessible
Number of no-cost accounts held for customers who do not qualify for a standard account or who might need additional support due to social or financial vulnerability.[1]

2022	**716,957**
2021	692,655
2020	678,554

1 The scope of this disclosure has expanded from 2021, where we only reported the number of accounts opened for homeless, refugees and survivors of human trafficking.

Supporting financial knowledge and education
We continue to invest in financial education content and features across different channels to help customers, colleagues and communities be confident users of financial services.

Between the beginning of 2020 and the end of 2022, we received over 4 million unique visitors to our global digital financial education content, achieving our 2019 goal. We will continue to engage customers with financial education content and build their financial capabilities through the introduction of personal financial management tools. Since launching a financial fitness score in the UK, 74,325 customers have used the tool to understand the healthiness of their finances based on details about their spending, borrowing and saving habits.

We support programmes that deliver financial education to our local communities. HSBC Life is sponsoring the Hong Kong Lutheran Social Service to develop the Health Dollar Fun App, to boost digital literacy among the elderly, enhance their physical well-being and encourage social interaction. Throughout 2021 and 2022, we also partnered with Injaz Al-Arab, member of JA Worldwide, to deliver our 'Saving for good' programme, which focuses on building the financial capability of low-income workers in Bahrain, Egypt, Kuwait, Qatar and the UAE. We have now supported over 1,700 individuals to grasp basic financial concepts such as budgeting, saving and investing through a combination of customised training courses and mentorship.

We also understand the importance of building financial capability in young people to ensure future resilience. In Mexico, we offer a podcast that covers a relevant financial educational theme in each episode. To date, the podcast has been downloaded more than 73,000 times.

In collaboration with BBC Children in Need, HSBC UK has worked with financial education charity Young Enterprise to adapt its award-winning Money Heroes programme for children and young people experiencing a range of issues and challenges in their lives. The education resources have been adapted to ensure they are accessible, with books available in braille and large-print, as well as British Sign Language signed videos, audiobooks and a new early-reader e-book.

Creating an inclusive banking experience
We aim to ensure that our banking products and services are designed to be accessible for customers experiencing either temporary or permanent challenging circumstances, such as disability, impairment or a major life event.

We are committed to becoming a digitally accessible bank so that our digital channels are usable by everyone, regardless of ability. We have been recognised by the charity AbilityNet as having the most accessible website compared with other local competitor banks in 10 out of 13 of our key Wealth and Personal Banking markets.

Support for customers extends beyond our digital channels. In recognition of the fact that not all disabilities are visible or immediately obvious to others, we have now joined the Hidden Disabilities Sunflower Lanyard Scheme in the UK and Hong Kong. The lanyard indicates that an individual may need additional support, help or a little more time. We also launched 'quiet hours' across all of our UK branches and 'quiet corners' at designated branches in Hong Kong, to provide a calmer and more inclusive environment.

Supporting women and minority-led businesses

We aim to support our diverse customers by opening up a world of opportunity for women and minorities.

In May 2022, we launched a Female Entrepreneur Fund that aims to provide $1bn in lending to female-owned businesses.

Other programmes include our Mujeres Al Mundo (Women of the World) programme in Mexico, which supports the personal and professional development of women as customers. Mujeres Al Mundo offers women exclusive benefits across financial products and services, discounts on workshops and programmes taught by the University Anahuac Mexico.

We have also begun lending from the $100m that we allocated in 2021 for companies founded and led by women and minorities through HSBC Ventures.

Engaging with our communities

Building a more inclusive world

We have a long-standing commitment to support the communities in which we operate. We aim to provide people with the skills and knowledge needed to thrive in the post-pandemic environment, and through the transition to a sustainable future.

We are empowering our people and those in our communities to develop skills for the future. Through our charitable partnerships and volunteering opportunities, our people share their skills and create a positive impact in society.

Our global reach is our unique strength. Bringing together diverse people, ideas and perspectives helps us open up opportunities and build a more inclusive world.

Building community and future skills
Our Future Skills strategy, launched in 2018, has supported over 6.6 million people through more than $197m in charitable donations. Current projections from our charity partners indicate our support during 2022 reached more than 1.45 million people through donations of $41m.

In anticipation of global economies transitioning towards a low-carbon future, our colleagues and charity partners initiated programmes that help people and communities respond to opportunities and challenges through building relevant skills:

- In the Middle East, we partner with the Posterity Institute and the Arab Youth Council for Climate Change to develop an open-source curriculum for teaching sustainability skills in higher education institutions in the region.
- In Argentina, the Academia Solar programme aims to train students in design, installation and commissioning of photovoltaic solar energy systems.
- In India, the Babuji Rural Enlightenment and Development Society teaches rural farmers sustainable farming practices, including soil and water management, helping them to increase their income.

We also work with our charity partners around the world to promote employability and financial capabilities in disadvantaged communities, and to respond to local needs:

- We support The Prince's Trust Group to help marginalised young people in Australia, Canada, India, Malaysia, Malta and the UK to develop employable skills.
- Our award-winning partnership with the Scouts has led to the creation of the first ever Money Skills Activity Badge for Beaver and Cub groups in the UK.
- We support Feeding America to help users of food banks in the US get on-site job skill training.
- We work with the China Volunteer Service Foundation to improve the financial capability of elderly people in Beijing, Shanghai, and Guangzhou.

Our support for Covid-19 relief efforts also continued in 2022, with a door-to-door vaccination programme in Hong Kong aiming to help 10,000 elderly or people with disabilities.

Community engagement and volunteering
We offer paid volunteering days, and encourage our people to give time, skills and knowledge to causes within their communities. In 2022, our colleagues gave over 67,000 hours to community activities during work time.

Engagement with pressure groups
We aim to maintain a constructive dialogue on important topics that are often raised by campaigning organisations and pressure groups.

Charitable giving in 2022

- Social, including Future Skills: **50%**
- Environment, including the Climate Solutions Partnership: **20%**
- Local priorities: **16%**
- Disaster relief and other giving: **14%**

Total cash giving towards charitable programmes
$116.8m

Hours volunteered during work time
>67,000

People reached through our Future Skills programme
1.45m

Awards
Investor and Financial Education Awards 2022 Hong Kong
– IFEA (Corporate) Gold Award

Climate Solutions Partnership

Our Climate Solutions Partnership is a five-year $100m philanthropic initiative that aims to identify and remove barriers to scale for climate change solutions. Working with the World Resources Institute, WWF and over 50 local partners, our support focuses on start-up companies developing carbon-cutting technologies, nature-based solutions, renewable energy initiatives in Asia and the WWF-led Asia Sustainable Palm Oil Links programme.

Since 2020, we have committed $95.8m of our $100m funding target to non-governmental organisation ('NGO') partners, supporting projects with the potential to make significant impacts in the mission to achieve a net zero, resilient and sustainable future.

Governance
Acting responsibly

We remain committed to high standards of governance. We work alongside our regulators and recognise our contribution to building healthy and sustainable societies.

At a glance

Our relationship
We act on our responsibility to run our business in a way that upholds high standards of corporate governance.

Customer experience is at the heart of how we operate. It is imperative that we treat our customers well, that we listen, and that we act to resolve complaints quickly and fairly. We measure customer satisfaction through net promoter scores across each of our business lines, listen carefully to customer feedback so we know where we need to improve, and take steps to do this.

We are committed to working with our regulators to manage the safety of the financial system, adhering to the spirit and the letter of the rules and regulations governing our industry.

We strive to meet our responsibilities to society, including through being transparent in our approach to paying taxes. We also seek to ensure we respect global standards on human rights in our workplace and our supply chains, and continually work to improve our compliance management capabilities.

For further details of our corporate governance, see our corporate governance report on page 239.

In this section

Setting high standards of governance	**How ESG is governed**	We expect that our ESG governance approach is likely to continue to develop, in line with our evolving approach to ESG matters and stakeholder expectations.	Page 86
Human rights	**Our respect for human rights**	As set out in our Human Rights Statement, we strive for continual improvement in our approach to human rights.	Page 87
Customer experience	**Customer satisfaction**	While customer satisfaction improved during the year, we have work to do to improve our rank position against competitors.	Page 89
	How we listen	We aim to be open and transparent in how we track, record and manage complaints.	Page 90
Integrity, conduct and fairness	**Safeguarding the financial system**	We have continued our efforts to combat financial crime and reduce its impact on our organisation, customers and communities that we serve.	Page 92
	Whistleblowing	Our global whistleblowing channel, HSBC Confidential, allows our colleagues and other stakeholders to raise concerns confidentially.	Page 92
	A responsible approach to tax	We seek to pay our fair share of tax in all jurisdictions in which we operate.	Page 93
	Acting with integrity	We aim to act with courageous integrity and learn from past events to prevent their recurrence.	Page 93
	Conduct: Our product responsibilities	Our conduct approach guides us to do the right thing and to focus on the impact we have on our customers and the geographies in which we operate.	Page 94
	Our approach with our suppliers	We require suppliers to meet our compliance and financial stability requirements, as well as to comply with our supplier code of conduct.	Page 94
Safeguarding data	**Data privacy**	We are committed to protecting and respecting the data we hold and process, in accordance with the laws and regulations of the geographies in which we operate.	Page 95
	Cybersecurity	We invest in our business and technical controls to help prevent, detect and mitigate cyber threats.	Page 96

Setting high standards of governance TCFD

How ESG is governed

The Board takes overall responsibility for ESG strategy, overseeing executive management in developing the approach, execution and associated reporting. Progress against our ESG ambitions is reviewed through Board discussion and review of key topics such as updates on our climate ambition and transition, customer experience and employee sentiment. The Board is regularly provided with specific updates on ESG matters, including the energy policy, human rights and employee well-being. Board members receive ESG-related training as part of their induction and ongoing development, and seek out further opportunities to build their skills and experience in this area. For further details of Board members' ESG skills and experience, see page 240. For further details of their induction and training in 2022, see page 252.

Given the wide-ranging remit of ESG matters, the governance activities are managed through a combination of specialist governance infrastructure and regular meetings and committees, where appropriate. These include the Group Disclosure and Controls Committee and Group Audit Committee, which provide oversight for the scope and content of ESG disclosures, and the Group People Committee, which provides oversight support for the Group's approach to performance management. For some areas, such as climate where our approach is more advanced, dedicated governance activities exist to support the wide range of activities, from sustainable finance solution development in the Sustainability Execution Review Group to climate risk management in the Climate Risk Oversight Forum.

The Group Chief Risk and Compliance Officer and the chief risk officers of our PRA-regulated businesses are the senior managers responsible for climate financial risks under the UK Senior Managers Regime. Climate risks are considered in the Group Risk Management Meeting and the Group Risk Committee, with scheduled updates provided, as well as detailed reviews of material matters, such as climate-related stress testing exercises.

The diagram on the right provides an illustration of our ESG governance process, including how the Board's strategy on climate is cascaded and implemented throughout the organisation. It identifies examples of forums that manage both climate-related opportunities and risks, along with their responsibilities and the responsible chair. The structure of the process is similar for the escalation of problems, with issues either resolved in a given forum or raised to the appropriate level of governance with appropriate scope and authority.

We expect that our ESG governance approach is likely to continue to develop, in line with our evolving approach to ESG matters and stakeholder expectations.

Human rights

Our respect for human rights

As set out in our Human Rights Statement, we recognise the role of business in respecting human rights. Our approach covers all aspects of internationally recognised human rights and is guided by the UN Guiding Principles on Business and Human Rights ('UNGPs') and the OECD Guidelines for Multinational Enterprises.

Refreshing our salient human rights issues
In 2022, building on an earlier human rights review that had identified modern slavery and discrimination as priority issues, we reviewed our salient human rights issues following the methodology set out in the UNGPs. These are the human rights at risk of the most severe potential negative impact through our business activities and relationships. It is important to understand these as inherent risks, based on the nature of our business. Identifying and regularly reviewing these risks helps us to validate and evolve our overall approach to human rights.

Through this review, we identified the following five human rights risks (salient human rights issues) inherent to HSBC's business globally:

- Right to decent work: This covers freedom from forced labour including freedom from slavery and child labour and protection from inhumane, harsh or degrading treatment or punishment. It also includes the right to just and favourable conditions of work including the right to reasonable working hours, fair working conditions and pay. It also covers the right to health and safety at work, including appropriate living conditions for workers as well as protection of their mental and physical health and safety while at work.
- Right to equality and freedom from discrimination: This covers the right to equal opportunity and freedom from discrimination on the basis of protected characteristics.
- Right to privacy: This includes the right to protection against interference with privacy.
- Cultural and land rights: This includes self-determination and the enjoyment of culture, religion and language, and the rights of indigenous people.
- Right to dignity and justice: This includes freedom of opinion and expression and freedom from arbitrary arrest, detention or exile.

Our salient human rights issues
Illustration of HSBC Group's inherent human rights risks mapped to business activities.

Inherent human rights risks		HSBC activities: Employer	Buyer	Provider of products and services: Personal customers	Business customers	Investor[1]
Right to decent work	Freedom from forced labour		◆		◆	◆
	Just and favourable conditions of work	◆	◆		◆	◆
	Right to health and safety at work	◆	◆	◆	◆	◆
Right to equality and freedom from discrimination		◆	◆	◆	◆	◆
Right to privacy		◆		◆		◆
Cultural and land rights			◆		◆	◆
Right to dignity and justice		◆	◆	◆	◆	◆

1 Investor includes our activities in HSBC Asset Management.

The assessment also considered our business activities and relationships in the context of our roles: as an employer; as a buyer of goods and services; as a provider of financial products and services to personal customers and, separately, to business customers; and as an investor, including all investment activities.

We assessed how each of these five roles might intersect with our five salient human rights issues. The table above shows the areas where we assessed severe negative impacts on human rights would be most likely to arise, in the absence of action to mitigate them. This additional analysis allows us to focus our efforts as we review the range of measures already in place to manage risks, and consider enhancements.

Managing risks to human rights
In 2022, we began the process of adapting our risk management procedures to reflect what we learned from the work on salient human rights issues described above. This included the development of Group guidance on human rights, which incorporates the salient human rights issues assessment and provides colleagues with practical advice, including case studies, on how to identify, prevent, mitigate and account for how we address our impacts on human rights.

We incorporated additional human rights elements into our existing procurement processes and supplier code of conduct, and we extended existing human rights due

Stakeholder engagement

As part of the process of validating our assessment of our salient human rights issues, we engaged with a range of internal and external stakeholders. These included:

- drawing on the experience of our employee groups, which gave us valuable feedback on human rights challenges in the workplace;
- working with civil society groups with expertise in one or more of our salient human rights issues, who could represent the views of potentially impacted people;
- interviewing of our largest investors to hear their assessments of the potential human rights impacts associated with the financial services industry, and we listened to their expectations of us in responding to the risks; and
- discussing our salient human rights issues with some of our key suppliers, our large business customers and the companies in which we invest, to understand their views of human rights impacts in different parts of the world and to develop collaborative approaches to addressing those impacts.

These stakeholder engagements and input from external human rights experts led us to alter or extend our initial assessments in several ways. For example, our discussions with civil society groups helped us understand the potential impact of our investments on all five of our salient human rights issues. Engagement with investors in HSBC informed our assessment of the way in which our salient human rights issues overlap with our approach to climate change and our commitment to a just transition (see next page).

Our respect for human rights continued

diligence processes for suppliers and business customers. We continued to develop our in-house capability on human rights, including by launching online resources for all staff and delivering bespoke human rights training for 520 employees across our network.

The actions we are taking to address these salient human rights issues are consistent with our values, and will help us to meet our commitments on diversity and inclusion, and those we have made under the UN Global Compact and the World Economic Forum metrics on risk for incidents of child, forced or compulsory labour.

For further details of the actions we have taken to respect the right to decent work, see our *Annual Statement under the UK Modern Slavery Act* at www.hsbc.com/modernslaveryact.

For further details of the actions taken to respect the right to equality and freedom from discrimination, see 'Our approach to diversity and inclusion' on page 74.

Sector policies
Some of our business customers operate in sectors in which the risk of adverse human rights impact is greater. Our sector policies for agricultural commodities, energy, forestry, mining and metals cover human rights issues such as forced labour, harmful or exploitative child labour, land rights, the rights of indigenous peoples, including 'free prior and informed consent', workers' rights, and the health and safety of communities.

Through our membership of international certification schemes such as the Forestry Stewardship Council, the Roundtable on Sustainable Palm Oil and the Equator Principles, we actively support the continual improvement of standards aimed at respecting human rights.

Our sector policies are reviewed periodically to ensure they reflect our priorities.

For further details of our policy prohibitions and other financing restrictions, see our sector-specific sustainability risk policies at www.hsbc.com/who-we-are/esg-and-responsible-business/managing-risk/sustainability-risk.

Financial crime controls
The risk of us causing, contributing or being linked to adverse human rights impacts is also mitigated by our financial crime risk management framework, which includes our global policies and associated controls.

For further details of how we fight financial crime, see www.hsbc.com/who-we-are/esg-and-responsible-business/fighting-financial-crime.

Other policies
HSBC's Principles for the *Ethical Use of Data and Artificial Intelligence* describe how we seek to respect rights to privacy while making use of these technologies.

Driving change
We continued to be active participants in industry forums, including the Thun Group of Banks, which is an informal group that seeks to promote understanding of the UNGPs within the sector.

HSBC has been an active member of the Mekong Club since 2016. We are a regular participant in its monthly financial services working group and use its informative typological toolkits, infographics, and other multimedia resources covering current and emerging human trafficking and modern slavery issues. Our Compliance teams regularly collaborate and engage with the Mekong Club in designing bank-wide knowledge sharing and training sessions.

Supporting those impacted and those potentially at risk
We continued to expand our Survivor Bank programme, which has now benefited over 2,000 survivors of modern slavery and human trafficking in the UK, and is a model for making financial services more accessible to vulnerable communities worldwide.

We built on this experience in developing access to banking services for customers in the UK and in Hong Kong with no fixed abode, providing over 4,000 accounts under these programmes.

We also responded to the devastating effects of the conflict in Ukraine by introducing a new process to help refugees to access the financial services they need to set up a new life in the UK. Over 9,000 people fleeing the conflict have opened a bank account with us.

For further details of our work to support vulnerable communities, see page 83.

Effectiveness
The table below includes indicative metrics we use to measure year-on-year continual improvement to our human rights processes.

Contracted suppliers who had either confirmed adherence to the code of conduct or provided their own alternative that was accepted by our Global Procurement function (%)	**93%**
No-cost accounts held for customers who do not qualify for a standard account or who might need additional support due to social or financial vulnerability	**716,957**
Employees who have received bespoke training on human rights	**520**
Votes against management for reasons including human rights[1]	**87**
Concerns raised related to bullying, harassment, discrimination and retaliation	**1,159**

1 The figure represents the number of resolutions at investee company shareholder meetings (including AGMs) where votes were cast against management for reasons related to human rights.

Working for a just transition

We aim to play a leading role in mobilising the transition to a global net zero economy, not just by financing it, but by helping to shape and influence the global policy agenda. When designing and implementing low-carbon pathways it is important to consider the communities and areas of the economy that will be facing the greatest challenges. This aligns closely with our commitments on human rights more broadly. This was demonstrated in June 2022 when HSBC and US fashion group PVH Corp. announced the first sustainable supply chain finance programme that includes human rights performance standards.

For further details on this programme, see page 58. See also our paper on Just and Inclusive Climate Transition for investors at www.assetmanagement.hsbc.co.uk/-/media/files/attachments/common/news-and-articles/articles/campaign-2022-11-02-hsbc-responsible-investment-insights-q4-2022.pdf.

Customer experience

We remain committed to improving customers' experiences. In 2022, we gathered feedback from over one million customers across our three global businesses to help us understand our strengths and the areas of focus. Our recommendation scores improved in more than 66% of our markets, although we still have work to do to improve our rank position against competitors.

Customer satisfaction

Listening to drive continual improvement
In 2022, we continued to embed our feedback system so we can better listen, learn and act on our customers' feedback. We use the net promoter score ('NPS') to provide a consistent measure of our performance. NPS is measured by subtracting the percentage of 'Detractors' from the percentage of 'Promoters'. 'Detractors' are customers who provide a score of 0 to 6, and 'promoters' are customers who provide a score of 9 to 10 to the question: 'On a scale on 0 to 10, how likely is it that you would recommend HSBC to a friend or colleague'.

We run studies that allow us to benchmark ourselves against other banks. In 2022, we expanded our surveys to 14 markets to cover India, France and Germany. We try to make it as easy as possible for customers to give us feedback, accelerating our use of digital real-time surveys to capture insight. By sharing this and other feedback with our front-line teams, and allowing them to respond directly to customers, we are improving how we address issues and realising opportunities.

Our WPB 'Customer in the room' programme launched in 2022 to bring our senior leadership closer to customers by providing them with direct access to customer feedback. The programme helps to demonstrate the impact of our decisions on our customers, and helps ensure we use customer feedback in all aspects of how we run our business.

How we fared
In WPB, our NPS increased in four of our six key markets, which were the UK, Hong Kong, mainland China and Singapore. Our NPS in Mexico remained unchanged, while our NPS in India saw a small decline. In Hong Kong, we were ranked in first place, with improved scores in wealth advisory, life insurance and investment products. Our PayMe payments app was also ranked in second place for digital wallets.

Our ranks in mainland China and India remained in the top three, while our rank in India declined to third place. Our NPS in India declined across the mobile app, branch and call centre channels. Our overall rank in Singapore improved, and we remained in the top three among our mass affluent and high net worth customers. Our rank in the UK remained unchanged, with improvements in our loan products and wealth advisory scores. However, customers told us we needed to focus more on making digital platforms more accessible; making payments easier; improving our account opening experience; and helping customers better monitor their spending. We have made a commitment to invest in making improvements in these areas.

In our private bank, our global NPS decreased to 25, compared with 31 in 2021. This was largely due to a decrease in our scores in Hong Kong, the US and Luxembourg, with mainland China and Taiwan now included in the overall score.

In CMB, our NPS increased in four of our six key markets, which were Hong Kong, mainland China, Singapore and Mexico. Our NPS declined in the UK and India. Our rank positions in Hong Kong, India, mainland China, Singapore and Mexico either improved compared with 2021, or were in the top three against competitors. However, our rank in India declined to third place. This was driven by a decline in NPS among our Business Banking customers. In the UK, our overall rank remained unchanged. We were ranked in the top three among our large corporate and mid-market enterprise customers in the UK, and we saw a small decline in NPS among our Business Banking customers. We continue to see some challenges in service delivery, particularly for our Business Banking customers. Among other initiatives, we have been working hard to resolve telephony resourcing, which has impacted our responsiveness.

In GBM, our global NPS improved from 13 to 17 points. Our global rank position remained in fifth place. We continued to be ranked in the top three against competitors in MENA, while our US rank improved. Our digital satisfaction score fell marginally by one point. We remained ranked first for the quality of our digital trade finance platforms.

Number of markets in top three or improving rank[1]

	2022
WPB	**4 out of 6**
CMB	**5 out of 6**

1 In 2022, we updated the markets we measure our rank positions for both our WPB and CMB businesses to align with executive incentive scorecards. They comprise: the UK, Hong Kong, Mexico, mainland China, India and Singapore. Rank positions are provided using data gathered through third-party research agencies

Acting on feedback

We continued to focus on improving our products and services to enable better customer experiences.

Across WPB, we launched our Global Money proposition, initially in the UK, which allows customers to open a multi-currency account and be able to use it within minutes. We also introduced a new mobile account opening journey in Singapore in response to preferences for mobile-first experiences.

In CMB, we deployed digital onboarding solutions to 12 markets in 2022, using external data sourcing to streamline client and colleague journeys. These deliveries increased our digital penetration by 14% from 2021, extending our digital products and services to more customers globally. Through using technology to digitise our operations, there was close to a 6% increase in 2022 in trade transactions initiated digitally by our customers, and nearly a 62% increase in payments completed using the HSBCnet mobile app.

In response to client feedback, we made a number of changes to our client coverage model in GBM during 2022. We reshaped our Institutional Client Group, particularly our approach to financial sponsors, sovereign wealth funds and global investors. We enhanced our corporate multinational model to focus on our largest relationships through regional account managers. We also launched a series of transaction banking solutions to improve the experience for our clients, and created a new digital collaboration layer to drive clearer accountability and coordination of global teams when delivering these solutions.

How we listen

To improve how we serve our customers, we must be open to feedback and acknowledge when things go wrong. We have adapted quickly to support our customers facing new challenges and new ways of working, especially as a result of Covid-19-related lockdown restrictions.

We aim to be open and consistent in how we track, record and manage complaints, although as we serve a wide range of customers – from personal banking and wealth customers to large corporates, institutions and governments – we tailor our approach in each of our global businesses. As the table on the right demonstrates, we have a consistent set of principles that enable us to remain customer-focused throughout the complaints process.

For further details on complaints volumes by geography, see our *ESG Data Pack* at www.hsbc.com/esg.

How we handle complaints

Our principles	Our actions
Making it easy for customers to complain	Customers can complain via the channel that best suits them. We provide a point of contact along with clear information on next steps and timescales.
Acknowledging complaints	All colleagues welcome complaints as opportunities and exercise empathy to acknowledge our customers' issues. Complaints are escalated if they cannot be resolved at first point of contact.
Keeping the customer up to date	We set clear expectations and keep customers informed throughout the complaint resolution process via their preferred channel.
Ensuring fair resolution	We thoroughly investigate all complaints to address concerns and ensure the right outcome for our customers.
Providing available rights	We provide customers with information on their rights and the appeal process if they are not satisfied with the outcome of the complaint.
Undertaking root cause analysis	Complaint causes are analysed on a regular basis to identify and address any systemic issues and to inform process improvements.

Wealth and Personal Banking ('WPB')

In 2022, we received approximately 1.2 million complaints from customers. The ratio of complaints per 1,000 customers per month in our large markets decreased slightly from 2.4 to 2.3.

In the UK, complaints fell 8% partly due to a decline in transaction disputes, which had risen during the Covid-19 pandemic. The reduction in these complaint volumes can also be attributed to journey improvements we made to deal with these disputes more quickly. We continue to be focused on improving the customer experience to reduce complaint volumes further during 2023.

The increase in complaints in Hong Kong was mainly related to reduced operations in our branches during Covid-19-related restrictions, an increase in fraudulent activities, and the migration by customers towards new ways of accessing and using our digital platforms. We are addressing these by seeking to improve our digital capabilities, timely staff reinforcement, enhanced guidance of how to use our digital platforms and improved customer journeys.

The decrease in complaints in Mexico was driven by improvements in fraud detection, as our fraud teams took actions to protect customers, including carrying out an upgrade to a monitoring tool for credit and debit cards and making adjustments to fraud rules.

In our private bank in 2022, we received 331 complaints, a 23% decrease on 2021, largely due to the reduction in administration and service issues. Within this category a high proportion were attributable to processing or client reporting delays/errors. In 2022, the private bank resolved 344 complaints.

WPB complaint volumes[1]
(per 1,000 customers per month)

		2022	2021
Total[2]		**2.3**	2.4
UK[3]	▶	**1.4**	1.4
Hong Kong[3]	▲	**1.0**	0.7
Mexico[3]	▼	**5.1**	5.5

1 A complaint is any expression of dissatisfaction about WPB's activities, products or services where a response or resolution is explicitly or implicitly expected.
2 Markets included: Hong Kong, mainland China, France, the UK, UAE, Mexico, Canada and the US.
3 The UK, Mexico and Hong Kong make up 86% of total complaints.

Acting on feedback

In 2022, we launched a Group-wide plan to deliver an improved experience for our customers around the world. The plan will strengthen our capabilities to hear, understand and act on what our customers are telling us on a regular basis. Across markets we enhanced our measurement and tracking capabilities, and developed the skills and tools our colleagues need to improve their customer experience each day. We also sought to standardise our customer-focused approach in our processes.

For our colleagues focused on improving our customers' experiences, we enhanced and launched regular forums in 15 of our key markets to ensure systematic reviews are carried out to prioritise feedback and implement improvements quickly regarding our customers' online and offline experiences. This allows us to have a structured approach to manage feedback.

In Hong Kong, we analyse customer feedback and detect their pain points at an early stage through a feedback mechanism. Our colleagues are now able to reach out to our customers with unhappy experiences proactively to resolve their outstanding issues.

How we listen continued

Commercial Banking ('CMB')

In 2022, we received 62,995 customer complaints, a decrease of 23.4% from 2021. Of the overall volumes, 78.1% came from the UK and 12.9% from Hong Kong. The most common complaint related to operations, namely payment processing errors and delays.

The reduced volume of received complaints in the UK was largely as a result of a reduction in Covid-19-related complaints. This was mainly due to the fact we received fewer complaints related to the Bounce Back Loan scheme, and we also resolved the under-resourcing in UK servicing centres, which had led to delays in customer support in 2021 and into the first half of 2022.

In Hong Kong, volumes were higher in the first half of the year due to the consequences of Covid-19-related restrictions that placed stress on servicing centre capacity. Additional recruiting of servicing staff, improvements in the customer due diligence policy and the payment investigations process helped to reduce complaints volumes in the second half of the year, resulting in annual volumes that were in line with 2021.

We resolved 65,018 complaints globally in 2022. The average resolution time for complaints reduced by 23% to an average of 5.7 days, which is within our global target of 20 days.

CMB complaint volumes[1]
(000s)

		2022	2021
Total		**63.0**	82.2
UK	▼	**49.2**	67.1
Hong Kong	▼	**8.1**	8.2

Acting on feedback

In 2022, we continued to invest in our client feedback tool, moving our products and local operations onto the platform. The Global Payments Solutions business adopted the tool during the year, and CMB staff in Hong Kong and India are due to begin logging and managing complaints in early 2023.

In late 2022, we also introduced new reporting functionality for complaints logged on the tool, which will update complaints on a daily basis, and enable colleagues responsible for managing complaints within markets and product teams to more closely manage volumes and operations.

We seek to ensure that we treat customers fairly when managing complaints, especially those who may be considered vulnerable or who have enhanced care needs. In 2022, we reported 865 complaints associated with such customers and have managed these closely to ensure fair outcomes for the customer.

Global Banking and Markets ('GBM')

In 2022, we received 2,127 customer complaints in Global Banking, a decrease of 8% from 2021.

Of the overall Global Banking complaints volumes, 45.6% were from complaints in Europe and 28.0% came from the MENA region. With regard to the types of complaint, 82% for Global Banking related to servicing and payment processing, which is in line with previous years.

In the Markets and Securities Services business, complaint volumes decreased by 6% from 2021. Of the overall Markets and Securities Services complaint volumes, 48% were in Asia and 43% in Europe. Our Markets and Securities Services business remains focused on providing a high standard of client service and commitment to resolving issues in a timely manner, with 93% closed within our service standards.

GBM complaint volumes[1]

		2022	2021
Total		**2,419**	2,619
Global Banking[2]	▼	**2,127**	2,310
Global Markets and Securities Services	▼	**292**	309

Acting on feedback

We have continued to invest in our client feedback tool to create a consistent and streamlined experience for front-line staff in Global Banking and Markets and the wholesale businesses globally. In the fourth quarter, we launched a new reporting module driven from our client feedback tool, which will provide real-time complaints volumes, complaint details and operational metrics for our complaints users. This additional information will enable management to respond to complaints volumes.

1 Globally, a complaint is any expression of dissatisfaction, whether justified or not, relating to the provision of, or failure to provide, a specific product or service or service activity. Within the UK, a complaint is any expression of dissatisfaction – whether justified or not – about our products, services or activities which suggests we have caused (or might cause) financial loss, or material distress or material inconvenience.

2 Global Banking also includes Global Payments Solutions (previously known as Global Liquidity and Cash Management) and complaints relating to payment operations, which is part of Digital Business Services.

Integrity, conduct and fairness

Safeguarding the financial system

We have continued our efforts to combat financial crime and reduce its impact on our organisation, customers and the communities that we serve. Financial crime includes fraud, bribery and corruption, tax evasion, sanctions and export control violations, money laundering, terrorist financing and proliferation financing.

We are committed to acting with integrity, and have a financial crime risk management framework that is applicable across all global businesses and functions, and all countries and territories in which we operate. The financial crime risk framework, which is overseen by the Board, is supported by our financial crime policies that are designed to enable adherence to applicable laws and regulations globally. Annual mandatory training is provided to all colleagues, with additional targeted training tailored to certain individuals. We carry out regular risk assessments, identifying where we need to respond to evolving financial crime threats, as well as monitoring and testing our financial crime risk management programme.

We continue to invest in new technology, including through the deployment of a capability to monitor correspondent banking activity, the enhancements to our fraud monitoring capability and our trade screening controls, and the application of machine learning to improve the accuracy and timeliness of our detection capabilities. These new technologies should enhance our ability to respond effectively to unusual activity and be more granular in our risk assessments. This helps us to protect our customers, the organisation and the integrity of the global financial system against financial crime.

Our anti-bribery and corruption policy
Our global anti-bribery and corruption policy requires that all activity must be: conducted without intent to bribe or corrupt; reasonable and transparent; considered to not be lavish nor disproportionate to the professional relationship; appropriately documented with business rationale; and authorised at an appropriate level of seniority. Our global anti-bribery and corruption policy requires that we identify and mitigate the risk of our customers and third parties committing bribery or corruption. Among other controls, we use customer due diligence and transaction monitoring to identify and help mitigate the risk that our customers are involved in bribery or corruption. We perform anti-bribery and corruption risk assessments on third parties that expose us to this risk.

The scale of our work

Each month, on average, we monitor over 1.2 billion transactions for signs of financial crime. During 2022, we filed over 73,000 suspicious activity reports to law enforcement and regulatory authorities where we identified potential financial crime. In addition, we screen approximately 117 million customer records monthly for sanctions exposure.

99%

Total percentage of employees who have received financial crime training, including on anti-bribery and corruption.

Whistleblowing

We want colleagues and stakeholders to have confidence in speaking up when they observe unlawful or unethical behaviour. We offer a range of speak-up channels to listen to the concerns of individuals and have a zero tolerance for acts of retaliation.

Listening through whistleblowing channels
Our global whistleblowing channel, HSBC Confidential, is one of our speak-up channels, which allows our colleagues and other stakeholders to raise concerns confidentially and, if preferred, anonymously (subject to local laws). In most of our markets, HSBC Confidential concerns are raised through an independent third party, offering 24/7 hotlines and a web portal in multiple languages. We also provide and monitor an external email address for concerns about accounting, internal financial controls or auditing matters (accountingdisclosures@hsbc.com). Concerns are investigated proportionately and independently, with action taken where appropriate. This can include disciplinary action, dismissal, and adjustments to variable pay and performance ratings.

We promote our full range of speak-up channels to colleagues to help ensure their concerns are handled through the most effective route. In 2022, 18% fewer concerns were raised through HSBC Confidential compared with 2021. Of the concerns investigated through the HSBC Confidential channel in 2022, 83% related to behaviour and conduct, 11% to security and fraud risks, 6% to compliance risks and less than 1% to other categories.

The Group Audit Committee has overall oversight of the Group's whistleblowing arrangements, and the chair of the Group Audit Committee acts as HSBC's whistleblowers' champion with responsibility for ensuring and overseeing the integrity, independence and effectiveness of the organisation's policies and procedures.

Compliance sets the whistleblowing policy and procedures, and provides the Group Audit Committee with periodic updates on their effectiveness. Specialist Compliance teams and investigation functions own whistleblowing controls, with monitoring in place to determine control effectiveness.

For further details of the role of the Group Audit Committee in relation to whistleblowing, see page 266.

HSBC Confidential concerns raised in 2022:

1,817

(2021: 2,224)

Substantiation rate of concerns investigated through HSBC Confidential in 2022:

41%

(2021: 42%)

A responsible approach to tax

We seek to pay our fair share of tax in all jurisdictions in which we operate and to minimise the likelihood of customers using our products and services to evade or inappropriately avoid tax. We also abide by international protocols that affect our organisation. Our approach to tax and governance processes is designed to achieve these goals.

Through adoption of the Group's risk management framework, we seek to ensure that we do not adopt inappropriately tax-motivated transactions or products, and that tax planning is scrutinised and supported by genuine commercial activity. HSBC has no appetite for using aggressive tax structures.

With respect to our own taxes, we are guided by the following principles:

- We are committed to applying both the letter and spirit of the law. This includes adherence to a variety of measures arising from the OECD Base Erosion and Profit Shifting initiative.
- We seek to have open and transparent relationships with all tax authorities. Given the size and complexity of our organisation, which operates across over 60 jurisdictions, a number of areas of differing interpretation or disputes with tax authorities exist at any point in time. We cooperate with the relevant local tax authorities to mutually agree and resolve these in a timely manner.
- We have applied the OECD/G20 Inclusive Framework Pillar 2 guidance to identify those jurisdictions in which we operate that have nil or low tax rates (15% or below). We have identified seven such jurisdictions in which we operated during 2022 that may be impacted by adjustments required under the Pillar 2 Framework. We continually monitor the number of active subsidiaries within each jurisdiction as part of our ongoing entity rationalisation programme. We seek to ensure that our entities active in nil or low tax jurisdictions have clear business rationale for why they are based in these locations and appropriate transparency over their activities.

With respect to our customers' taxes, we are guided by the following principles:

- We have made considerable investments to support external tax transparency initiatives and reduce the risk of banking services being used to facilitate customer tax evasion. Initiatives include the US Foreign Account Tax Compliance Act, the OECD Standard for Automatic Exchange of Financial Account Information ('Common Reporting Standard'), and the UK legislation on the corporate criminal offence of failing to prevent the facilitation of tax evasion.
- We implement processes that aim to ensure that inappropriately tax-motivated products and services are not provided to our customers.

Our tax contributions

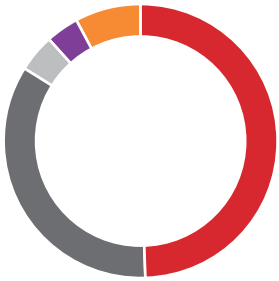
The effective tax rate for the year of 4.9% was reduced by 14.3% by the recognition of previously unrecognised deferred tax assets in the UK and France in light of improvements in forecast profits in these jurisdictions. Further details are provided on page 357. The UK bank levy charge for 2022 of $13m is lower than the charge of $116m for 2021 as it includes adjustments made to prior period UK bank levy charges recognised in the current year.

As highlighted below, in addition to paying $5.5bn of our own tax liabilities during 2022, we collected taxes of $10.2bn on behalf of governments around the world. A more detailed geographical breakdown of the taxes paid in 2022 is provided in the *ESG Data Pack*.

Taxes paid – by type of tax

- Tax on profits **$2,429m** (2021: $2,711m)
- Withholding taxes **$361m** (2021: $366m)
- Employer taxes **$1,041m** (2021: $1,125m)
- Bank levy **$314m** (2021: $479m)
- Irrecoverable VAT **$1,152m** (2021: $1,315m)
- Other duties and levies[1] **$232m** (2021: $278m)

Taxes paid – by region



- Europe **$2,745m** (2021: $3,170m)
- Asia-Pacific **$1,894m** (2021: $2,077m)
- Middle East and North Africa **$259m** (2021: $236m)
- North America **$207m** (2021: $469m)
- Latin America **$424m** (2021: $322m)

Taxes collected – by region

- Europe **$4,197m** (2021: $3,177m)
- Asia-Pacific **$3,274m** (2021: $3,584m)
- Middle East and North Africa **$67m** (2021: $78m)
- North America **$1,129m** (2021: $1,081m)
- Latin America **$1,493m** (2021: $1,343m)

1 Other duties and levies includes property taxes of $94m (2021: $126m).

Acting with integrity

We aim to act with courageous integrity and learn from past events to prevent their recurrence. We recognise that restoration of trust in our industry remains a significant challenge, but it is a challenge we must continue to pursue. We owe this not just to our customers and to society at large, but to our colleagues to ensure they can be rightly proud of the organisation where they work. We aim to make decisions based on doing the right thing for our customers and never compromising our ethical standards or integrity.

Further information regarding the measures that we have taken to prevent the recurrence of past mistakes can be found at www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-and-policies.

Conduct: Our product responsibilities

Our conduct approach guides us to do the right thing and to focus on the impact we have for our customers and the financial markets in which we operate. It is embedded into the way we design, approve, market and manage products and services, with a focus on five clear outcomes:

- We understand our customers' needs.
- We provide products and services that offer a fair exchange of value.
- We service customers' ongoing needs, and put it right if we make a mistake.
- We act with integrity in the financial markets we operate in.
- We operate resiliently and securely to avoid harm to customers and markets.

We train all our staff on our approach to conduct, helping to ensure our conduct outcomes are part of everything we do.

Designing products and services
Our approach to product development is set out in our policies, and provides a clear basis on which informed decisions can be made. Our policies require that products must be fit-for-purpose throughout their existence, meeting regulatory requirements and associated conduct outcomes.

Our approach includes:

- designing products to meet identified customer needs;
- managing products through governance processes, helping to ensure they meet customers' needs and deliver a fair exchange of value;
- periodically reviewing products to help ensure they remain relevant and perform in line with expectations we have set; and
- improving, or withdrawing from sale, products which do not meet our customers' needs or no longer meet our high standards.

Meeting our customers' needs
Our policies and procedures set standards to ensure that we consider and meet customer needs. These include:

- enabling customers to understand the key features of products and services;
- enabling customers to make informed decisions before purchasing a product or service; and
- ensuring processes are in place for the provision of advice to customers.

They help us provide the right outcomes for customers, including those with enhanced care needs. This helps us to support customers who are more vulnerable to external impacts, including the current cost of living crisis (see 'Supporting our customers facing a rising cost of living' on page 15).

Financial promotion
Our policies help to ensure that in the sale of products and services, we use marketing and product materials that support customer understanding and fair customer outcomes. This includes providing information on products and services that is clear, fair and not misleading. We also have controls in place to ensure our cross-border marketing complies with relevant regulatory requirements.

Product governance
Our product governance arrangements cover the entire lifecycle of the product. This helps ensure that our products meet our policy requirements before we sell them. It also allows continued risk-based oversight of product performance against the intended customer outcomes.

When we decide to withdraw a product from sale, we aim to consider the implications for our existing customers, and agree actions to help them achieve a fair outcome where appropriate.

Our approach with our suppliers

We maintain global standards and procedures for the onboarding and use of third-party suppliers. We require suppliers to meet our compliance and financial stability requirements, and to comply with our supplier code of conduct.

Sustainable procurement
In October 2022, we introduced an internal sustainable procurement procedure to set out the minimum sustainability requirements for procurement activity. This helps us to manage the risks related to sustainability in our supply chain, and balance the social, environmental and economic considerations in procurement decisions.

Supplier code of conduct
We have a supplier code of conduct, revised in 2022, which sets out our commitments to the environment, diversity and human rights, and which outlines the minimum commitments we expect of our suppliers on these issues.

We formalise commitment to the code with clauses in our supplier contracts, which support the right to audit and act if a breach is discovered.

At the end of 2022, 93% of approximately 9,600 contracted suppliers had either confirmed adherence to the supplier code of conduct or provided their own alternative that was accepted by our Global Procurement function.

Managing environmental and social risk
In 2022, we updated our ESG reputational risk assessment tool to identify the environmental and social risks for suppliers that are considered to be in sectors with high ESG risk. Previously, the assessment was applied to suppliers with higher value contracts only. The tool provides an ESG reputational risk score for the supplier. A high-risk score results in a further review to establish whether we are able to mitigate the risk and onboard the supplier.

For further details of the number of suppliers by geographical region, see the *ESG Data Pack* at www.hsbc.com/esg.

Safeguarding data

Data privacy

We are committed to protecting and respecting the data we hold and process, in accordance with the laws and regulations of the markets in which we operate.

Our approach rests on having the right talent, technology, systems, controls, policies and processes to help ensure appropriate management of privacy risk. Our Group-wide privacy policy and principles aim to provide a consistent global approach to managing data privacy risk, and must be applied by all of our global businesses and global functions. Our privacy principles are available at www.hsbc.com/who-we-are/esg-and-responsible-business/managing-risk/operational-risk.

We conduct regular employee training and awareness sessions on data privacy and security issues throughout the year. This includes global mandatory training for all our colleagues, with additional training sessions, where needed, to keep up to date with new developments in this space.

We provide transparency to our customers and stakeholders on how we collect, use and manage their personal data, and their associated rights. Where relevant, we work with third parties to help ensure adequate protections are provided, in line with our data privacy policy and as required under data privacy law. We offer a broad range of channels in the markets where we operate, through which customers and stakeholders can raise concerns on the privacy of their data.

Our dedicated privacy teams report to the highest level of management on data privacy risks and issues, and oversee our global data privacy programmes. We review data privacy regularly at multiple governance forums, including at Board level, to help ensure appropriate challenge and visibility for senior executives. Data privacy laws and regulations continue to evolve globally. We continually monitor the regulatory environment to ensure we respond appropriately to any changes.

As part of our three lines of defence model, our Global Internal Audit function provides independent assurance as to whether our data privacy risk management approaches and processes are designed and operating effectively. In addition, we have established data privacy governance structures, and continue to embed accountability across all businesses and functions.

We continue to implement industry practices for data privacy and security. Our privacy teams work closely with our data protection officers, industry bodies and research institutions to drive the design, implementation and monitoring of privacy solutions. We conduct regular reviews and privacy risk assessments, and continue to develop solutions to strengthen our data privacy controls.

We continue to enhance our internal data privacy tools to improve accountability for data privacy. We have procedures to articulate the actions needed to deal with data privacy considerations. These include notifying regulators, customers or other data subjects, as required under applicable privacy laws and regulations, in the event of a reportable incident occurring.

Intellectual property rights practices
We have policies, controls and guidance to manage risk relating to intellectual property. This is to help ensure that intellectual property is identified, maintained and protected appropriately, and to help ensure we do not infringe third-party intellectual property rights during the course of business and/or operation.

These policies and controls support our management of intellectual property risk, and operate to help ensure that intellectual property risk is controlled consistently and effectively in line with our risk appetite.

Data Privacy Day

In January 2022, we hosted an internal global data privacy event for our colleagues to mark International Data Privacy Day. The event, which was broadcast online, was hosted by our Global Head of Data Privacy Legal and the Global Data Risk Steward. The President and CEO of the International Association of Privacy Professionals was a guest speaker at the event.

Key themes included an exploration of developments in US state and federal data privacy legislation and regulations, developments in the implementation and embedding of existing data privacy laws, key challenges to organisations such as cross-border data transfers and data localisation requirements, and the evolving enforcement environment within which we operate.

The ethical use of data and AI

Artificial intelligence and other emerging technologies give us the ability to process and analyse data at a depth and breadth not previously possible. While these technologies offer significant potential benefits for our customers, they also pose potential ethical risks for the financial services industry and society as a whole. We have developed a set of principles to help us consider and address the ethical issues that could arise. HSBC's Principles for the Ethical Use of Data and Artificial Intelligence are available at www.hsbc.com/who-we-are/esg-and-responsible-business/our-conduct.

Cybersecurity

The threat of cyber-attacks remains a concern for our organisation, as it does across the financial sector. As cyber-attacks continue to evolve, failure to protect our operations may result in disruption for customers, manipulation of data or financial loss. This could have a negative impact on our customers and our reputation.

We continue to monitor ongoing geopolitical events and changes to the cyber threat landscape, and take necessary proactive measures with the aim to reduce any impact to our customers.

Prevent, detect and mitigate
We invest in business and technical controls to help prevent, detect and mitigate cyber threats. We apply a 'defence in depth' approach to cyber controls, recognising the complexity of our environment. Our ability to detect and respond to attacks through round-the-clock security operations centre capabilities helps to reduce the impact of attacks.

We continually evaluate threat levels for the most prevalent attack types and their potential outcomes. We have a cyber intelligence and threat analysis capability, which proactively collects and analyses external cyber information. We input into the broader cyber intelligence community through technical expertise in investigations and contributions to the cyber-sharing ecosystem in the financial services industry, alongside government agencies around the world.

In 2022, we further strengthened our cyber defences and enhanced our cybersecurity capabilities to help reduce the likelihood and impact of unauthorised access, security vulnerabilities being exploited, data leakage, third-party security exposure and advanced malware. These defences build upon a proactive data analytical approach to help identify advanced targeted threats.

Policy and governance
We have a comprehensive range of cybersecurity policies and systems designed to help ensure that the organisation is well managed, with oversight and control.

We operate a three lines of defence model, aligned to the operational risk management framework, to help ensure oversight and challenge of our cybersecurity capabilities and priorities. In the first line of defence, we have risk owners within global businesses and functions who are accountable for identifying and managing the cyber risk. They work with control owners to apply the appropriate risk treatment in line with our risk appetite. Our controls are executed in line with policies produced by our Resilience Risk teams, and are reviewed and challenged by the second line of defence. They are overseen by the Global Internal Audit function, the third line of defence.

We regularly report and review cyber risk and control effectiveness at relevant governance forums, including to the Board and across global businesses, functions and regions. In addition, we work with our third parties to help reduce the threat of cyber-attacks impacting our business processes. We have an assessment capability to review third parties' compliance with our information security policies and standards.

Cyber training and awareness
We understand the important role our people play in protecting against cybersecurity threats. Our mission is to equip every colleague with the appropriate tools and behaviours they need to keep our organisation and customers' data safe. We provide cybersecurity training and awareness to all our people, ranging from our top executives to IT developers to front-line relationship managers around the world.

Over 92% of our IT developers hold at least one of our enhanced security certifications to help ensure we build secure systems and products.

We host an annual cyber awareness month for all colleagues, covering topics such as online safety at home, social media safety, safe hybrid working and cyber incidents and response. Our dedicated cybersecurity training and awareness team provides regular programmes to our colleagues and customers. We provide a wide range of education and guidance to both customers and our colleagues about how to spot and prevent online fraud.

Over 97%
Employees completed mandatory cybersecurity training on time.

Over 92%
IT developers who hold at least one of our internal secure developer certifications.

Over 140
Cybersecurity education events held globally.

Over 97%
Survey respondents to cybersecurity education events who said they have a better understanding of cybersecurity following these events.

Educating customers online

Our Fraud and Cyber Awareness app, which launched in the UK in May 2021, has been enhanced and extended to eight markets in the Middle East and North Africa as a pilot to improve the financial education of our customers. The app is available free of charge for both personal and business customers, and is designed to keep customers and non-customers up to date with the latest trends concerning fraud, scams and cyber-attacks. It enables users to subscribe to real-time notifications about emerging fraud and cybercrime trends. Since May 2021, the app has been downloaded approximately 28,000 times and has a 4.8 rating on Google Play and iOS app store. We plan to roll out the app to further markets in 2023.

Financial review

The financial review gives detailed reporting of our financial performance at Group level as well as across our different global businesses and geographical regions.

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Pioneering a sustainable supply chain finance programme

In June 2022, we worked closely with US-based fashion group PVH Corp. to launch the first sustainable supply chain finance programme tied to environmental and social objectives, and based on suppliers' sustainability ratings.

The programme provides the company's global suppliers with access to critical funding based on a set of science-based environmental targets, as well as a series of social elements, including a healthy and safe working environment, compensation and benefits, and employment issues, such as forced labour, child labour, and harassment and abuse.

Sustainable supply chain finance supports leading companies and key sectors like the apparel industry to help ensure progress is made towards their targets and commitments.

Financial summary

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Use of alternative performance measures

Our reported results are prepared in accordance with IFRSs as detailed in the financial statements starting on page 324.

To measure our performance, we supplement our IFRSs figures with non-IFRSs measures, which constitute alternative performance measures under European Securities and Markets Authority guidance and non-GAAP financial measures defined in and presented in accordance with US Securities and Exchange Commission rules and regulations. These measures include those derived from our reported results that eliminate factors that distort year-on-year comparisons. The 'adjusted performance' measure used throughout this report is described below. Definitions and calculations of other alternative performance measures are included in our 'Reconciliation of alternative performance measures' on page 128. All alternative performance measures are reconciled to the closest reported performance measure.

The global business segmental results are presented on an adjusted basis in accordance with IFRS 8 'Operating Segments' as detailed in Note 10 'Segmental analysis' on page 360.

Adjusted performance

Adjusted performance is computed by adjusting reported results for the effects of foreign currency translation differences and significant items, which both distort year-on-year comparisons.

We consider that adjusted performance provides useful information for investors by aligning internal and external reporting, identifying and quantifying items management believes to be significant, and providing insight into how management assesses year-on-year performance.

Management does not assess forward-looking reported operating expenses as a target of the business, and therefore a reconciliation of the adjusted operating expenses target to an equivalent IFRS measure is not available without unreasonable efforts.

Significant items

'Significant items' refers collectively to the items that management and investors would ordinarily identify and consider separately to improve the understanding of the underlying trends in the business.

The tables on pages 109 to 112 and pages 119 to 124 detail the effects of significant items on each of our global business segments, geographical regions and selected countries/territories in 2022, 2021 and 2020.

Foreign currency translation differences

Foreign currency translation differences reflect the movements of the US dollar against most major currencies during 2022.

We exclude them to derive constant currency data, allowing us to assess balance sheet and income statement performance on a like-for-like basis and to better understand the underlying trends in the business.

Foreign currency translation differences

Foreign currency translation differences for 2022 are computed by retranslating into US dollars for non-US dollar branches, subsidiaries, joint ventures and associates:

- the income statements for 2021 and 2020 at the average rates of exchange for 2022; and
- the balance sheets at 31 December 2021 and 31 December 2020 at the prevailing rates of exchange on 31 December 2022.

No adjustment has been made to the exchange rates used to translate foreign currency-denominated assets and liabilities into the functional currencies of any HSBC branches, subsidiaries, joint ventures or associates. The constant currency data of HSBC's Argentina subsidiaries has not been adjusted further for the impacts of hyperinflation. Since 1 June 2022, Türkiye has been deemed a hyperinflationary economy for accounting purposes. HSBC has an operating entity in Türkiye and the constant currency data has not been adjusted further for the impacts of hyperinflation.

When reference is made to foreign currency translation differences in tables or commentaries, comparative data reported in the functional currencies of HSBC's operations have been translated at the appropriate exchange rates applied in the current period on the basis described above.

Changes to presentation from 1 January 2022

Application of IAS 29 'Financial Reporting in Hyperinflationary Economies'

Since 1 June 2022, Türkiye has been deemed a hyperinflationary economy for accounting purposes. The results of HSBC's operations with a functional currency of the Turkish lira have been prepared in accordance with IAS 29 'Financial Reporting in Hyperinflationary Economies' as if the economy had always been hyperinflationary. The results of those operations for the 12-month period ended 31 December 2022 are stated in terms of current purchasing power using the Türkiye Consumer Price Index ('CPI') at 31 December 2022 with the corresponding adjustment presented in the consolidated statement of comprehensive income. In accordance with IAS 21 'The Effects of Changes in Foreign Exchange Rates', the results have been translated and presented in US dollars at the prevailing rates of exchange on 31 December 2022. The Group's comparative information presented in US dollars with respect to the 12-month periods ended 31 December 2021 and 31 December 2020 has not been restated. Argentina remains a hyperinflationary economy for accounting purposes. The impact of applying IAS 29 and the hyperinflation provisions of IAS 21 in the current period for both Türkiye and Argentina was a decrease in the Group's profit before tax of $548m, comprising a decrease in revenue of $541m (including a loss of net monetary position of $543m) and an increase in ECL and operating expenses of $7m. The CPI at 31 December 2022 for Türkiye was 1,047 (movement 2022: 359.94) and for Argentina was 1,147 (movement 2022: 563.92, 2021: 197.47).

Changes to presentation from 1 January 2023

Foreign currency and notable items

From 1 January 2023, 'adjusted performance' will no longer exclude the impact of significant items. Rather it will be computed by adjusting reported results only for the effects of foreign currency translation differences between periods to enable users to understand the impact this has had on the Group's performance. We will separately disclose 'notable items', which are components of our income statement which management and investors would consider as outside the normal course of business and generally non-recurring in nature. We will recalibrate applicable targets and guidance to reflect the impact of these changes, as well as the impact on our targets following the implementation of IFRS 17 'Insurance Contracts', and

intend to communicate these as part of our first quarter results in May 2023.

Reporting by legal entity

From 1 January 2023, the Group will no longer present results by geographical regions. We will instead report performance by our main legal entities to better reflect the Group's structure.

Future accounting developments

IFRS 17 'Insurance Contracts'

IFRS 17 'Insurance Contracts' was issued in May 2017, with amendments to the standard issued in June 2020 and December 2021. Following the amendments, IFRS 17 is effective for annual reporting periods beginning on or after 1 January 2023 and is applied retrospectively, with comparatives restated from 1 January 2022.

On the basis of the implementation work performed to date, our current assumption remains that the accounting changes will result in a reduction in the earnings of our insurance business by approximately two thirds on transition to IFRS 17, albeit within a range of expected outcomes and before the effect of market impacts in specific periods. Unlike current accounting where market impacts and changes in assumptions are reported immediately in profit or loss, under IFRS 17 these are primarily accumulated with the contractual service margin ('CSM') and recognised in profit or loss over the remaining life of the contracts. While IFRS 17 changes the timing of profit recognition, there is no impact to the underlying economics of the insurance business, including solvency, capital and cash generation.

Results of work performed to date on the half-year to 30 June 2022 IFRS17 comparatives indicate there would be a likely reduction to reported profit before tax for our insurance manufacturing operations from $0.6bn under IFRS 4, to approximately $0.3bn under IFRS 17. IFRS 4 based profit before tax included negative market impacts of $0.7bn and a $0.3bn specific pricing update for policyholder funds held on deposit with us in Hong Kong. The consolidated Group insurance accounting considers the effect of eliminating intra-group distribution fees between insurance manufacturing and non-insurance Group entities, and instead includes the costs of selling insurance contracts incurred by such entities within the Group CSM. These factors generate a further impact on the 30 June 2022 Group IFRS 17 profit before tax of negative $0.1bn, in addition to the impact on insurance manufacturing operations.

We also anticipate some impact on selected key Group metrics. We expect an estimated reduction of approximately $1.1bn to the first half of 2022 Group net interest income due to the reclassification of assets supporting policyholder liabilities from amortised cost to fair value through profit and loss classification, following which the associated interest income will be included within the 'net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss' line item. Group operating expenses are expected to reduce by approximately $0.3bn as a result of the IFRS 17 requirement for directly attributable costs to be included in the CSM and recognised within the insurance service result line, within revenue.

These estimates are based on accounting policies, assumptions, judgements and estimation techniques that remain subject to change.

Critical accounting estimates and judgements

The results of HSBC reflect the choice of accounting policies, assumptions and estimates that underlie the preparation of HSBC's consolidated financial statements. The significant accounting policies, including the policies which include critical accounting estimates and judgements, are described in Note 1.2 on the financial statements. The accounting policies listed below are highlighted as they involve a high degree of uncertainty and have a material impact on the financial statements:

- Impairment of amortised cost financial assets and financial assets measured at fair value through other comprehensive income ('FVOCI'): The most significant judgements relate to defining what is considered to be a significant increase in credit risk, determining the lifetime and point of initial recognition of revolving facilities, selecting and calibrating the probability of default ('PD'), the loss given default ('LGD') and the exposure at default ('EAD') models, as well as selecting model inputs and economic forecasts, and making assumptions and estimates to incorporate relevant information about late-breaking and past events, current conditions and forecasts of economic conditions. A high degree of uncertainty is involved in making estimations using assumptions that are highly subjective and very sensitive to the risk factors. See Note 1.2(i) on page 341.
- Deferred tax assets: The most significant judgements relate to those made in respect of recoverability, which is based on expected future profitability. See Note 1.2(l) on page 346.
- Valuation of financial instruments: In determining the fair value of financial instruments a variety of valuation techniques are used, some of which feature significant unobservable inputs and are subject to substantial uncertainty. See Note 1.2(c) on page 339.
- Impairment of investment in subsidiaries: Impairment testing involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment, based on a number of management assumptions. The most significant judgements relate to the impairment testing of HSBC Holdings' investment in HSBC North America Holdings Limited and HSBC Bank Bermuda Limited. See Note 1.2(a) on page 337.
- Impairment of interests in associates: Impairment testing involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment, based on a number of management assumptions. The most significant judgements relate to the impairment testing of our investment in Bank of Communications Co., Limited ('BoCom'). See Note 1.2(a) on page 337.
- Impairment of goodwill and non-financial assets: A high degree of uncertainty is involved in estimating the future cash flows of the cash-generating units ('CGUs') and the rates used to discount these cash flows. See Note 1.2(a) on page 337.
- Provisions: Significant judgement may be required due to the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. See Note 1.2(m) on page 346.
- Post-employment benefit plans: The calculation of the defined benefit pension obligation involves the determination of key assumptions including discount rate, inflation rate, pension payments and deferred pensions, pay and mortality. See Note 1.2(k) on page 345.
- Non-current assets and disposal groups held for sale: Management judgement is required on determining the likelihood of the sale to occur, and the anticipated timing in assessing whether the held for sale criteria have been met. See Note 1.2(o) on page 347.

Given the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of the items above, it is possible that the outcomes in the next financial year could differ from the expectations on which management's estimates are based, resulting in the recognition and measurement of materially different amounts from those estimated by management in these financial statements.

Consolidated income statement

Summary consolidated income statement

	2022	2021	2020	2019	2018
	$m	$m	$m	$m	$m
Net interest income	**32,610**	26,489	27,578	30,462	30,489
Net fee income	**11,451**	13,097	11,874	12,023	12,620
Net income from financial instruments held for trading or managed on a fair value basis	**10,469**	7,744	9,582	10,231	9,531
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	**(3,394)**	4,053	2,081	3,478	(1,488)
Change in fair value of designated debt and related derivatives[1]	**(77)**	(182)	231	90	(97)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**226**	798	455	812	695
Gains less losses from financial investments	**(3)**	569	653	335	218
Net insurance premium income	**12,825**	10,870	10,093	10,636	10,659
Impairment loss relating to the planned sale of our retail banking operations in France[2]	**(2,378)**	—	—	—	—
Other operating income/(loss)	**(133)**	502	527	2,957	960
Total operating income	**61,596**	63,940	63,074	71,024	63,587
Net insurance claims and benefits paid and movement in liabilities to policyholders	**(9,869)**	(14,388)	(12,645)	(14,926)	(9,807)
Net operating income before change in expected credit losses and other credit impairment charges[3]	**51,727**	49,552	50,429	56,098	53,780
Change in expected credit losses and other credit impairment charges	**(3,592)**	928	(8,817)	(2,756)	(1,767)
Net operating income	**48,135**	50,480	41,612	53,342	52,013
Total operating expenses excluding impairment of goodwill and other intangible assets	**(33,183)**	(33,887)	(33,044)	(34,955)	(34,622)
Impairment of goodwill and other intangible assets	**(147)**	(733)	(1,388)	(7,394)	(37)
Operating profit	**14,805**	15,860	7,180	10,993	17,354
Share of profit in associates and joint ventures	**2,723**	3,046	1,597	2,354	2,536
Profit before tax	**17,528**	18,906	8,777	13,347	19,890
Tax expense	**(858)**	(4,213)	(2,678)	(4,639)	(4,865)
Profit for the year	**16,670**	14,693	6,099	8,708	15,025
Attributable to:					
– ordinary shareholders of the parent company	**14,822**	12,607	3,898	5,969	12,608
– preference shareholders of the parent company	**—**	7	90	90	90
– other equity holders	**1,213**	1,303	1,241	1,324	1,029
– non-controlling interests	**635**	776	870	1,325	1,298
Profit for the year	**16,670**	14,693	6,099	8,708	15,025

Five-year financial information

	2022	2021	2020	2019	2018
	$	$	$	$	$
Basic earnings per share	**0.75**	0.62	0.19	0.30	0.63
Diluted earnings per share	**0.74**	0.62	0.19	0.30	0.63
Dividends per ordinary share (paid in the period)[4]	**0.27**	0.22	—	0.51	0.51
	%	%	%	%	%
Dividend payout ratio[5]	**44**	40	79	100	81
Post-tax return on average total assets	**0.6**	0.5	0.2	0.3	0.6
Return on average ordinary shareholders' equity	**8.7**	7.1	2.3	3.6	7.7
Return on average tangible equity	**9.9**	8.3	3.1	8.4	8.6
Effective tax rate	**4.9**	22.3	30.5	34.8	24.5

1 *The debt instruments, issued for funding purposes, are designated under the fair value option to reduce an accounting mismatch.*
2 *Includes impairment of goodwill of $425m.*
3 *Net operating income before change in expected credit losses and other credit impairment charges also referred to as revenue.*
4 *Includes an interim dividend of $0.09 per ordinary share in respect of the financial year ending 31 December 2022, paid in September 2022, and an interim dividend of $0.18 per ordinary share in respect of the financial year ending 31 December 2021, paid in April 2022.*
5 *Dividend per share, in respect of the period, as a percentage of earnings per share adjusted for certain items (recognition of certain deferred tax assets: $0.11 reduction in EPS; planned sales of the retail banking operations in France and banking business in Canada: $0.09 increase in EPS). No items were adjusted in 2021, 2020, 2019 or 2018.*

Unless stated otherwise, all tables in the Annual Report and Accounts 2022 *are presented on a reported basis.*

For a summary of our financial performance in 2022, see page 28.

For further financial performance data for each global business and geographical region, see pages 109 to 112 and 117 to 127 respectively. The global business segmental results are presented on an adjusted basis in accordance with IFRS 8 'Operating Segments', in Note 10: Segmental analysis on page 360.

Income statement commentary

The following commentary compares Group financial performance for the year ended 2022 with 2021.

Net interest income

	Year ended			Quarter ended		
	31 Dec 2022	31 Dec 2021	31 Dec 2020	**31 Dec 2022**	30 Sep 2022	31 Dec 2021
	$m	$m	$m	**$m**	$m	$m
Interest income	**55,059**	36,188	41,756	**19,548**	14,656	9,219
Interest expense	**(22,449)**	(9,699)	(14,178)	**(9,970)**	(6,075)	(2,438)
Net interest income	**32,610**	26,489	27,578	**9,578**	8,581	6,781
Average interest-earning assets	**2,203,639**	2,209,513	2,092,900	**2,178,281**	2,170,599	2,251,433
	%	%	%	**%**	%	%
Gross interest yield[1]	**2.50**	1.64	2.00	**3.56**	2.68	1.62
Less: gross interest payable[1]	**(1.24)**	(0.53)	(0.81)	**(2.21)**	(1.36)	(0.52)
Net interest spread[2]	**1.26**	1.11	1.19	**1.35**	1.32	1.10
Net interest margin[3]	**1.48**	1.20	1.32	**1.74**	1.57	1.19

1 *Gross interest yield is the average annualised interest rate earned on average interest-earning assets ('AIEA'). Gross interest payable is the average annualised interest cost as a percentage on average interest-bearing liabilities.*
2 *Net interest spread is the difference between the average annualised interest rate earned on AIEA, net of amortised premiums and loan fees, and the average annualised interest rate payable on average interest-bearing funds.*
3 *Net interest margin is net interest income expressed as an annualised percentage of AIEA.*

Summary of interest income by type of asset

	2022			2021			2020		
	Average balance	**Interest income**	**Yield**	Average balance	Interest income	Yield	Average balance	Interest income	Yield
	$m	**$m**	**%**	$m	$m	%	$m	$m	%
Short-term funds and loans and advances to banks	**446,178**	**5,596**	**1.25**	450,678	1,105	0.25	298,255	1,264	0.42
Loans and advances to customers	**1,023,606**	**32,607**	**3.19**	1,060,658	26,071	2.46	1,046,795	29,391	2.81
Reverse repurchase agreements – non-trading	**231,052**	**4,886**	**2.11**	206,246	1,019	0.49	221,901	1,819	0.82
Financial investments	**430,327**	**9,836**	**2.29**	438,840	6,729	1.53	463,542	8,143	1.76
Other interest-earning assets	**72,476**	**2,134**	**2.94**	53,091	1,264	2.38	62,407	1,139	1.83
Total interest-earning assets	**2,203,639**	**55,059**	**2.50**	2,209,513	36,188	1.64	2,092,900	41,756	2.00

Summary of interest expense by type of liability

	2022			2021			2020		
	Average balance	**Interest expense**	**Cost**	Average balance	Interest expense	Cost	Average balance	Interest expense	Cost
	$m	**$m**	**%**	$m	$m	%	$m	$m	%
Deposits by banks[1]	**75,739**	**770**	**1.02**	75,671	198	0.26	65,536	330	0.50
Customer accounts[2]	**1,342,342**	**10,903**	**0.81**	1,362,580	4,099	0.30	1,254,249	6,478	0.52
Repurchase agreements – non-trading	**118,309**	**3,085**	**2.61**	114,201	363	0.32	125,376	963	0.77
Debt securities in issue – non-trading	**179,814**	**5,608**	**3.12**	193,137	3,603	1.87	219,610	4,944	2.25
Other interest-bearing liabilities	**87,719**	**2,083**	**2.37**	70,929	1,436	2.02	76,395	1,463	1.92
Total interest-bearing liabilities	**1,803,923**	**22,449**	**1.24**	1,816,518	9,699	0.53	1,741,166	14,178	0.81

1 *Including interest-bearing bank deposits only.*
2 *Including interest-bearing customer accounts only.*

Net interest income ('NII') for 2022 was $32.6bn, an increase of $6.1bn or 23% compared with 2021. The increase reflected the benefit of rising global interest rates, while actively managing our pricing strategy and funding requirements, with growth in all regions, notably in Asia and the UK.

Excluding the unfavourable impact of foreign currency translation differences, net interest income increased by $7.7bn or 31%.

NII for the fourth quarter was $9.6bn, up 41% compared with the previous year, and 12% compared with the previous quarter. This was driven by higher interest rates and management of our funding costs, with growth in all regions, notably in Asia and the UK.

Net interest margin ('NIM') for 2022 of 1.48% was up 28 basis points ('bps') compared with 2021, as the gross yield on AIEA improved by 86bps in the high interest rate environment. This was partly offset by the rise in the funding cost of average interest-bearing liabilities of 71bps. Excluding the adverse impact of foreign currency translation differences, net interest income increased by 29bps.

NIM for the fourth quarter of 2022 was 1.74%, up 55bps year on year, and up 17bps compared with the previous quarter, predominantly driven by the impact of higher market interest rates.

Interest income for 2022 of $55.1bn increased by $18.9bn or 52%, primarily due to higher average interest rates compared with 2021, as the yield on AIEA rose by 86bps, mainly driven by loans and advances to customers, short-term funds, loans and advances to banks, and reverse repurchase agreements. However, mortgage yields rose more modestly due to competitive pressures and market factors in the UK and Hong Kong. The increase in interest income included adverse effects of foreign currency translation differences of $2.2bn. Excluding this, interest income increased by $21.1bn.

Interest income of $19.5bn in the fourth quarter was up $10.3bn year on year, and up $4.9bn from the previous quarter. The increase was driven by the impact of higher interest rates, resulting in improved yields on loans and advances to customers and reverse repurchase agreements.

Interest expense for 2022 of $22.4bn increased by $12.8bn or 131% compared with 2021. This reflected the increase in funding cost of 71bps, mainly arising from higher interest rates paid on interest-bearing customer accounts, repurchase agreements and debt securities in issue. The increase in interest expense included the favourable effects of foreign currency translation differences of $0.6bn. Excluding this, interest expense increased by $13.4bn.

Included within net interest income in 2022 is a $2.5bn interest expense representing a component of centrally allocated funding costs associated with generating 'net income from financial instruments held for trading or managed on a fair value basis'. This compared with an interest expense of $0.4bn in 2021.

Interest expense of $10.0bn in the fourth quarter of 2022 was up $7.5bn year on year, and up $3.9bn compared with the previous quarter. The steep rise in interest expense was mainly driven by higher funding cost on customer accounts as interest rates increased, particularly in Asia and Europe.

Net fee income of $11.5bn was $1.6bn lower than in 2021, and included an adverse impact from foreign currency translation differences of $0.6bn. Net fee income fell in WPB and GBM, although it increased in CMB.

In WPB, net fee income decreased by $0.9bn. The reduction was mainly in Wealth, as adverse market sentiment resulted in lower customer demand, mainly in Hong Kong. Fee income fell due to lower sales of unit trusts and from subdued customer demand in funds under management, as well as from lower broking income. Cards income grew as spending increased compared with 2021. This also resulted in higher fee expense.

In GBM, net fee income decreased by $0.8bn. This was driven by lower fee income from underwriting, in line with the reduction in the global fee pool. Fee income also decreased in credit facilities and in corporate finance, reflecting subdued client demand.

In CMB, net fee income increased by $0.1bn. Fee income grew in cards, as spending increased compared with 2021, and in account services, reflecting greater client activity in transaction banking, notably Global Payments Solutions ('GPS').

Net income from financial instruments held for trading or managed on a fair value basis of $10.5bn was $2.7bn higher compared with 2021. This primarily reflected a strong trading performance in Global Foreign Exchange due to increased client activity, driven by elevated levels of market volatility.

This was partly offset by adverse fair value movements on non-qualifying hedges of $0.5bn.

Net expense from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss of $3.4bn compared with a net income of $4.1bn in 2021. This reduction primarily reflected unfavourable equity market performances in Hong Kong and France. This compared with 2021, which benefited from favourable equity markets.

This adverse movement resulted in a corresponding movement in liabilities to policyholders and the present value of in-force long-term insurance business ('PVIF') (see 'Other operating income/expense'). This reflected the extent to which the policyholders and shareholders respectively participate in the investment performance of the associated assets.

Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss of $0.2bn was $0.6bn lower compared with 2021. This primarily reflected lower revaluation gains in our Principal Investments business in GBM.

Gains less losses from financial investments of $3m were $0.6bn lower compared with 2021, reflecting lower gains on the disposal of debt securities.

Net insurance premium income of $12.8bn was $2.0bn higher than in 2021, primarily reflecting higher sales volumes, particularly in Hong Kong, which had a higher proportion of single premium products in its product mix, as well as in Singapore following our acquisition of AXA Insurance Pte Limited.

Impairment loss relating to the sale of the retail banking operations in France was $2.4bn. In accordance with IFRS 5 'Non-current Assets Held for Sale and Discontinued Operations', the disposal group was classified as held for sale on 30 September 2022, at which point the Group recognised the estimated impairment of $2.4bn, which included impairment of goodwill of $0.4bn and related transaction costs.

Other operating income/expense was an expense of $0.1bn compared with an income of $0.5bn in 2021, and included an adverse impact from foreign currency translation differences of $0.4 bn. The reduction also reflected losses of $0.4bn related to the planned sales of our branch operations in Greece and our business in Russia, as well as the non-recurrence of a prior year gain on the sale of a property in Germany. These reductions were partly offset by a gain of $0.1bn on the completion of our acquisition of AXA Singapore and a favourable change in PVIF of $0.2bn.

The favourable change in PVIF included a $0.2bn increase in the value of new business, notably in Hong Kong, a $0.5bn favourable impact from sharing lower investment returns with policyholders, and a $0.3bn gain following a pricing update for our policyholders' funds held on deposit with us in Hong Kong to reflect the cost to provide this service. These factors were partly offset by a $0.7bn reduction from assumption changes, primarily reflecting the impact of higher interest rates in Hong Kong.

PVIF is presented in accordance with IFRS 4 'Insurance Contracts'. As set out on page 335, IFRS 17 'Insurance Contracts' is effective from 1 January 2023. Under IFRS 17, there will be no PVIF asset recognised. Instead, the estimated future profit will be included in the measurement of the insurance contract liability as the contractual service margin and gradually recognised in revenue as services are provided over the duration of the insurance contract.

Net insurance claims and benefits paid and movement in liabilities to policyholders was $4.5bn lower, primarily in France and Hong Kong due to a reduction in returns on financial assets supporting contracts where the policyholder is subject to part or all of the investment risk. This was in part mitigated by higher sales volumes in Hong Kong.

Change in expected credit losses and other credit impairment charges ('ECL') were a charge of $3.6bn, compared with a net release of $0.9bn in 2021.

The charges in 2022 reflected stage 3 charges of $2.2bn, in part relating to exposures to the commercial real estate sector in mainland China. We also recognised stage 1 and stage 2 charges in all global businesses, reflecting a deterioration in the macroeconomic environment, with many markets experiencing increased interest rates, continued inflation, supply chain risks and heightened recessionary risks. These economic conditions also contributed to the increase in stage 3 charges, mainly in CMB and GBM. These increases were in part mitigated by the release of most of our remaining Covid-19-related allowances.

The charge in 2022 compared with a net release in 2021, primarily relating to Covid-19-related allowances previously built up in 2020.

For further details on the calculation of ECL, including the measurement uncertainties and significant judgements applied to such calculations, the impact of the economic scenarios and management judgemental adjustments, see pages 153 to 162.

Operating expenses – currency translation and significant items

	Year ended	
	2022	2021
	$m	$m
Significant items	**2,864**	2,335
– customer redress programmes	**(31)**	49
– disposals, acquisitions and investment in new businesses	**18**	—
– impairment of goodwill and other intangibles	**(4)**	587
– restructuring and other related costs	**2,881**	1,836
– currency translation on significant items		(137)
Currency translation		2,181
Year ended 31 Dec	**2,864**	4,516

Operating expenses

	Year ended	
	2022	2021
	$m	$m
Gross employee compensation and benefits	**19,288**	19,612
Capitalised wages and salaries	**(922)**	(870)
Goodwill impairment	**—**	587
Property and equipment	**5,005**	5,145
Amortisation and impairment of intangibles	**1,716**	1,438
UK bank levy[1]	**13**	116
Legal proceedings and regulatory matters	**246**	106
Other operating expenses[2]	**7,984**	8,486
Total operating expenses (reported)	**33,330**	34,620
Total significant items (including currency translation on significant items)	**(2,864)**	(2,335)
Currency translation		(2,181)
Total operating expenses (adjusted)	**30,466**	30,104

1 The UK bank levy charge for the year ended 2022 includes adjustments made to prior period UK bank levy charges recognised in the current year.
2 Other operating expenses includes professional fees, contractor costs, transaction taxes, marketing and travel. The decrease was driven by favourable currency translation movements, partly offset by higher costs related to our cost reduction programme.

Staff numbers (full-time equivalents)[1]

	2022	2021	2020
Global businesses			
Wealth and Personal Banking	**128,764**	130,185	135,727
Commercial Banking	**43,640**	42,969	43,221
Global Banking and Markets	**46,435**	46,166	46,729
Corporate Centre	**360**	377	382
At 31 Dec	**219,199**	219,697	226,059

1 Represents the number of full-time equivalent people with contracts of service with the Group who are being paid at the reporting date.

Operating expenses of $33.3bn were $1.3bn or 4% lower than in 2021, primarily as foreign currency translation differences resulted in a favourable impact of $2.2bn, and due to the non-recurrence of a 2021 goodwill impairment of $0.6bn related to our WPB business in Latin America.

Reported operating expenses also reflected the impact of ongoing cost discipline across the Group. This helped mitigate growth from increased investment in technology of $0.5bn, which included investments in our digital capabilities, the impact of business volume growth, and inflation. Restructuring and other related costs increased by $1.0bn.

In 2022, cost to achieve spend, included within restructuring and other related costs, was $2.9bn. This three-year programme ended on 31 December 2022 with a total spend of $6.5bn and cumulative gross saves realised of $5.6bn. We expect additional gross cost savings of approximately $1bn to be delivered in 2023 due to actions taken in 2022.

The number of employees expressed in full-time equivalent staff ('FTE') at 31 December 2022 was 219,199, a decrease of 498 compared with 31 December 2021. The number of contractors at 31 December 2022 was 6,047, a decrease of 145.

Share of profit in associates and joint ventures of $2.7bn was $0.3bn lower, primarily as 2021 included a higher share of profit from Business Growth Fund in the UK due to the recovery in asset valuations. This was partly offset by an increase in the share of profit from The Saudi British Bank.

In relation to Bank of Communications Co., Limited ('BoCom'), we continue to be subject to a risk of impairment in the carrying value of our investment. We have performed an impairment test on the carrying amount of our investment and confirmed there was no impairment at 31 December 2022.

For more information, see Note 18: Interests in associates and joint ventures on page 379.

Tax expense

	Year ended	
	2022	2021
	$m	$m
Reported tax charge	**858**	4,213
Currency translation		(279)
Tax significant items	**3,429**	307
– tax credit on significant items	**1,118**	328
– recognition of losses	**2,330**	(4)
– uncertain tax positions	**(19)**	—
– currency translation		(17)
Adjusted tax charge	**4,287**	4,241

Tax expense

The effective tax rate for 2022 of 4.9% was lower than the 22.3% in 2021. Tax in 2022 included a $2.2bn credit arising from the recognition of a deferred tax asset from historical tax losses in HSBC Holdings, which was recognised as a significant item. This was a result of improved profit forecasts for the UK tax group, which accelerated the expected utilisation of these losses and reduced uncertainty regarding their recoverability. We also benefited from other deferred tax asset reassessments during 2022. Excluding these, the effective tax rate for 2022 was 19.2%, which was 3.1 percentage points lower than in 2021. The effective tax rate for 2022 was also decreased by the remeasurement of deferred tax balances following the substantive enactment in the first quarter of 2022 of legislation to reduce the rate of the UK banking surcharge from 8% to 3% from 1 April 2023.

Supplementary table for planned disposals

The income statements and selected balance sheet metrics for the year ended 31 December 2022 of our banking business in Canada and our retail banking operations in France are shown below.

The asset and liability balances relating to these planned disposals are reported on the Group balance sheet within 'Assets held for sale' and 'Liabilities of disposal groups held for sale', respectively, as at 31 December 2022.

Income statement and selected balance sheet metrics of disposal groups held for sale

	Year ended 2022	
	Canada[1]	**France retail[2]**
	$bn	**$bn**
Revenue	**1.9**	**0.6**
ECL	**(0.1)**	**—**
Operating expenses[3]	**(1.0)**	**(0.5)**
Profit before tax	**0.8**	**0.1**
Loans and advances to customers	**55.2**	**25.0**
Customer accounts	**60.6**	**22.3**
RWA[4]	**31.9**	**5.0**

1 *Under the terms of the sale agreement, the pre-tax profit on the sale will be recognised through a combination of the consolidation of HSBC Canada's results into the Group's financial statements from 30 June 2022 until completion, and the remaining gain on sale recognised at completion.*

2 *France retail includes the transferring retail banking business, HSBC SFH and associated supporting services. For more information, see Note 23: Assets held for sale and liabilities of disposal groups held for sale on page 389.*

3 *Includes $0.3bn in Canada and $0.1bn in France retail in respect of Group recharges and other costs not transferring as part of the planned transactions.*

4 *Includes $3.0bn in Canada and $0.9bn in France retail in respect of operational risk RWAs.*

Consolidated balance sheet

Five-year summary consolidated balance sheet

	2022	2021	2020	2019	2018
	$m	$m	$m	$m	$m
Assets					
Cash and balances at central banks	**327,002**	403,018	304,481	154,099	162,843
Trading assets	**218,093**	248,842	231,990	254,271	238,130
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**45,063**	49,804	45,553	43,627	41,111
Derivatives	**284,146**	196,882	307,726	242,995	207,825
Loans and advances to banks	**104,882**	83,136	81,616	69,203	72,167
Loans and advances to customers	**924,854**	1,045,814	1,037,987	1,036,743	981,696
Reverse repurchase agreements – non-trading	**253,754**	241,648	230,628	240,862	242,804
Financial investments	**425,564**	446,274	490,693	443,312	407,433
Assets held for sale[1]	**115,919**	3,411	299	123	735
Other assets	**267,253**	239,110	253,191	229,917	203,380
Total assets at 31 Dec	**2,966,530**	2,957,939	2,984,164	2,715,152	2,558,124
Liabilities and equity					
Liabilities					
Deposits by banks	**66,722**	101,152	82,080	59,022	56,331
Customer accounts	**1,570,303**	1,710,574	1,642,780	1,439,115	1,362,643
Repurchase agreements – non-trading	**127,747**	126,670	111,901	140,344	165,884
Trading liabilities	**72,353**	84,904	75,266	83,170	84,431
Financial liabilities designated at fair value	**127,327**	145,502	157,439	164,466	148,505
Derivatives	**285,764**	191,064	303,001	239,497	205,835
Debt securities in issue	**78,149**	78,557	95,492	104,555	85,342
Liabilities of disposal groups held for sale[1]	**114,597**	9,005	—	—	313
Liabilities under insurance contracts	**114,844**	112,745	107,191	97,439	87,330
Other liabilities	**212,696**	190,989	204,019	194,876	167,261
Total liabilities at 31 Dec	**2,770,502**	2,751,162	2,779,169	2,522,484	2,363,875
Equity					
Total shareholders' equity	**187,484**	198,250	196,443	183,955	186,253
Non-controlling interests	**8,544**	8,527	8,552	8,713	7,996
Total equity at 31 Dec	**196,028**	206,777	204,995	192,668	194,249
Total liabilities and equity at 31 Dec	**2,966,530**	2,957,939	2,984,164	2,715,152	2,558,124

1 *'Assets held for sale' in 2021, including $2.4bn of loans and advances to customers in relation to our exit of mass market retail banking business in the US, were reported within 'Other assets' in the* Annual Report and Accounts 2021. *Similarly, $8.8bn of customer accounts classified as 'Liabilities of disposal groups' were previously presented within 'Other liabilities'.*

A more detailed consolidated balance sheet is contained in the financial statements on page 326.

Five-year selected financial information

	2022	2021	2020	2019	2018
	$m	$m	$m	$m	$m
Called up share capital	**10,147**	10,316	10,347	10,319	10,180
Capital resources[1]	**162,423**	177,786	184,423	172,150	173,238
Undated subordinated loan capital	**1,967**	1,968	1,970	1,968	1,969
Preferred securities and dated subordinated loan capital[2]	**29,921**	28,568	30,721	33,063	35,014
Risk-weighted assets	**839,720**	838,263	857,520	843,395	865,318
Total shareholders' equity	**187,484**	198,250	196,443	183,955	186,253
Less: preference shares and other equity instruments	**(19,746)**	(22,414)	(22,414)	(22,276)	(23,772)
Total ordinary shareholders' equity	**167,738**	175,836	174,029	161,679	162,481
Less: goodwill and intangible assets (net of tax)	**(18,383)**	(17,643)	(17,606)	(17,535)	(22,425)
Tangible ordinary shareholders' equity	**149,355**	158,193	156,423	144,144	140,056
Financial statistics					
Loans and advances to customers as a percentage of customer accounts	**58.9%**	61.1%	63.2%	72.0%	72.0%
Average total shareholders' equity to average total assets	**6.34%**	6.62%	6.46%	6.97%	7.16%
Net asset value per ordinary share at year-end ($)[3]	**8.50**	8.76	8.62	8.00	8.13
Tangible net asset value per ordinary share at year-end ($)[4]	**7.57**	7.88	7.75	7.13	7.01
Tangible net asset value per fully diluted share at year-end ($)	**7.51**	7.84	7.72	7.11	6.98
Number of $0.50 ordinary shares in issue (millions)	**20,294**	20,632	20,694	20,639	20,361
Basic number of $0.50 ordinary shares outstanding (millions)	**19,739**	20,073	20,184	20,206	19,981
Basic number of $0.50 ordinary shares outstanding and dilutive potential ordinary shares (millions)	**19,876**	20,189	20,272	20,280	20,059
Closing foreign exchange translation rates to $:					
$1: £	**0.830**	0.739	0.732	0.756	0.783
$1: €	**0.937**	0.880	0.816	0.890	0.873

1 *Capital resources are regulatory total capital, the calculation of which is set out on page 205.*
2 *Including perpetual preferred securities, details of which can be found in Note 29: Subordinated liabilities on page 393.*
3 *The definition of net asset value per ordinary share is total shareholders' equity, less non-cumulative preference shares and capital securities, divided by the number of ordinary shares in issue, excluding own shares held by the company, including those purchased and held in treasury.*
4 *The definition of tangible net asset value per ordinary share is total ordinary shareholders' equity excluding goodwill, PVIF and other intangible assets (net of deferred tax), divided by the number of basic ordinary shares in issue, excluding own shares held by the company, including those purchased and held in treasury.*

Combined view of customer lending and customer deposits

	2022	2021
	$m	$m
Combined customer lending		
Loans and advances to customers	**924,854**	1,045,814
Loans and advances to customers of disposal groups reported in 'Assets held for sale'	**80,576**	2,385
– Canada	**55,197**	
– France retail banking operations	**25,029**	
– other[1]	**350**	2,385
At 31 Dec	**1,005,430**	1,048,199
Combined customer deposits		
Customer accounts	**1,570,303**	1,710,574
Customer accounts reported in 'Liabilities of disposal groups held for sale'	**85,274**	8,750
– Canada	**60,606**	
– France retail banking operations	**22,348**	
– other[1]	**2,320**	8,750
At 31 Dec	**1,655,577**	1,719,324

1 *At 31 December 2021, 'other' included loans and advances and customer accounts relating to the disposal of the US mass market retail banking business. This sale completed in February 2022.*

Balance sheet commentary compared with 31 December 2021

At 31 December 2022, total assets of $3.0tn, were broadly unchanged on a reported basis and increased by $161bn or 6% on a constant currency basis.

During the period, asset and liability balances mainly relating to the planned sales of our retail banking operations in France and our banking business in Canada were reclassified to 'Assets held for sale' and 'Liabilities of disposal groups held for sale'.

Reported loans and advances to customers as a percentage of customer accounts was 58.9%, compared with 61.1% at 31 December 2021. The movement in this ratio reflected the reclassifications to held for sale mentioned above.

Assets

Cash and balances at central banks decreased by $76bn or 19%, which included a $32bn adverse impact of foreign currency translation differences. The decrease was mainly in the US, reflecting the redeployment of liquidity into reverse repurchase agreements, and also due to a reduction in customer accounts. In addition, lower balances in the UK primarily reflected growth in lending to customers and banks, on a constant currency basis.

Trading assets decreased by $31bn or 12%, reflecting a reduction in equity and debt securities held, particularly in Hong Kong and the UK, reflecting weaker client demand.

Derivative assets increased by $87bn or 44%, mainly in Europe, reflecting favourable revaluation movements on interest rate contracts due to movements in long-term yield curve rates in most major markets. Foreign exchange contracts also increased, primarily in the UK, as a result of foreign exchange rate movements. The increase in derivative assets was consistent with the increase in derivative liabilities, as the underlying risk is broadly matched.

Loans and advances to banks increased by $22bn or 26%, primarily reflecting increases in the UK and Hong Kong.

Loans and advances to customers of $925bn decreased by $121bn or 12% on a reported basis. This included the following items:

- adverse impacts of foreign currency translation differences of $55bn; and
- the reclassification of $81bn to 'Assets held for sale' primarily relating to the planned sales of our retail banking operations in France and our banking business in Canada in 2022, and $2bn in 2021 primarily associated with the US mass market retail banking business sales which were disposed of during 2022.

On a constant currency basis and including balances classified as held for sale, loans and advances to customers increased by $12bn. This included the impact of the subsequent sale of US mass market retail balances that were held for sale at 31 December 2021 of $2bn with the remaining growth of $14bn reflecting the following movements.

In WPB, customer lending increased by $15bn, reflecting growth in mortgage balances, notably in the UK (up $9bn), Hong Kong (up $3bn) and Australia (up $2bn).

In CMB, customer lending was $3bn higher from term lending increases in India, Australia and the US. Lending also increased in the UK, primarily in trade lending. This was partly offset by a reduction in term lending of $8bn in Hong Kong as customer demand for lending softened in the second half of 2022.

In GBM, lending fell by $3bn due to a reduction in Global Banking term lending in the fourth quarter of 2022, primarily in Hong Kong, partly offset by a growth in overdrafts balances in the UK.

Financial investments decreased by $21bn or 5%, mainly in Europe from the adverse impact of foreign currency translation differences since 31 December 2021. The reduction included adverse fair value movements recorded in 'other comprehensive income' in equity on debt securities, treasury and other eligible bills as a result of higher yield curves and wider macroeconomic pressures. It also included reductions due to disposals and maturity of these securities. The reductions were partly offset by increases in debt instruments measured at amortised cost, as we repositioned our portfolio to reduce capital volatility.

Assets held for sale of $116bn primarily comprised the assets relating to the planned sales of our retail banking operations in France and our banking business in Canada.

Other assets increased by $28bn, reflecting growth in cash collateral of $21bn due to an increase in the fair value of derivative liabilities.

Liabilities

Deposits by banks decreased by $34bn or 34%, primarily in Europe, Hong Kong and the US.

Customer accounts of $1.6tn decreased by $140bn or 8% on a reported basis. This included the following items:

- adverse impacts of foreign currency translation differences of $88bn; and
- the reclassification of $85bn to 'Liabilities of disposal groups held for sale' primarily relating to the planned sales of our retail banking operations in France and our banking business in Canada in 2022, and $9bn in 2021 primarily associated with the US mass market retail banking business which was disposed of during 2022.

On a constant currency basis and including balances classified as held for sale, customer accounts increased by $24bn. This included the impact of the subsequent sale of US mass market retail balances that were held for sale at 31 December 2021 of $9bn with the remaining growth of $33bn reflecting the following movements.

In GBM, customer accounts rose by $16bn. This was driven by growth in interest-bearing and term deposit balances as customers demonstrated a preference for higher yielding accounts as interest rates rose, notably in Europe.

In WPB, customer accounts grew by $17bn, reflecting higher interest-bearing and term deposit balances, as interest rates rose, primarily in the UK and Asia.

In CMB, customer accounts remained broadly stable, with reductions in Hong Kong, the US, and the UK, mitigated by growth in other Asia markets.

Derivative liabilities increased by $95bn or 50%, which is consistent with the increase in derivative assets, since the underlying risk is broadly matched.

Liabilities of disposal groups held for sale of $115bn primarily comprised the liabilities relating to the planned sales of our retail banking operations in France and our banking business in Canada.

Other liabilities increased by $22bn, notably from growth in cash collateral of $20bn, mainly due to the increase in fair value of derivative assets.

Equity

Total shareholders' equity, including non-controlling interests, decreased by $11bn or 5% compared with 31 December 2021.

Profits generated of $17bn were offset by net losses through other comprehensive income ('OCI') of $17bn. In addition, shareholders' equity fell as a result of dividends paid of $7bn, the redemption of perpetual subordinated contingent convertible capital securities of $3bn and the impact of our $1bn share buy-back announced at our 2021 results in February 2022.

The net losses in OCI of $17bn included adverse movements of $5bn on financial instruments designated as hold-to-collect-and-sell, which are held as hedges to our exposure to interest rate movements, as a result of the increase in term market yield curves in 2022. The net loss also included an adverse impact from foreign exchange differences of $10bn and losses of $4bn on cash flow hedges. These losses were partly offset by fair value gains on liabilities related to changes in own credit risk of $2bn.

In the earlier stages of a rising interest rate environment, the Group is positively exposed to rising interest rates through net interest income, although there is an impact on our capital base due to the fair value of hold-to-collect-and-sell instruments. These instruments are reported within 'financial investments'. There is an initial negative effect materialising through reserves, after which the net interest income is expected to result in a net benefit for the Group over time, provided policy rates follow market implied rates.

Over time, these adverse OCI movements will unwind as the instruments reach maturity, although not all will necessarily be held to maturity.

Risk-weighted assets

Risk-weighted assets ('RWAs') totalled $839.7bn at 31 December 2022, a $1.4bn increase since 2021. Excluding foreign currency translation differences of $41.9bn, RWAs rose by $43.3bn in 2022. This was mainly due to the following movements:

- a $20.9bn asset size increase, mostly caused by CMB and WPB lending growth in Europe and Asia, offset by reduced lending in GBM; and
- a $24.2bn increase in RWAs due to changes in methodology and policy. This was mostly due to regulatory changes, data enhancements driven by internal and external reviews of our regulatory reporting processes and the reversal of the beneficial changes to the treatment of software assets.

Customer accounts by country/territory

	2022	2021
	$m	$m
Europe	**601,473**	667,769
– UK	**493,028**	535,797
– France[1]	**33,726**	56,841
– Germany	**28,949**	22,509
– Switzerland	**5,167**	10,680
– other	**40,603**	41,942
Asia	**784,236**	792,098
– Hong Kong	**542,543**	549,429
– Singapore	**61,475**	57,572
– mainland China	**56,948**	59,266
– Australia	**28,506**	28,240
– India	**22,636**	24,507
– Malaysia	**16,008**	16,500
– Taiwan	**15,316**	15,483
– Indonesia	**5,840**	6,019
– other	**34,964**	35,082
Middle East and North Africa (excluding Saudi Arabia)	**43,933**	42,629
– United Arab Emirates	**23,331**	20,943
– Türkiye	**3,497**	4,258
– Egypt	**6,045**	6,699
– other	**11,060**	10,729
North America	**109,093**	178,565
– US	**100,404**	111,921
– Canada[1]	**—**	58,071
– other	**8,689**	8,573
Latin America	**31,568**	29,513
– Mexico	**25,531**	23,583
– other	**6,037**	5,930
At 31 Dec	**1,570,303**	1,710,574

1 *At 31 December 2022, customer accounts of $85bn met the criteria to be classified as held for sale and are reported within 'Liabilities of disposal groups held for sale' on the balance sheet, of which $61bn and $22bn belongs to the planned sales of the banking business in Canada and retail banking operations in France, respectively. Refer to Note 23 on page 389 for further details.*

Loans and advances, deposits by currency

	At						
	31 Dec 2022						
$m	**USD**	**GBP**	**HKD**	**EUR**	**CNY**	**Others[1]**	**Total**
Loans and advances to banks	**34,495**	**12,292**	**5,188**	**6,328**	**7,833**	**38,746**	**104,882**
Loans and advances to customers	**182,719**	**265,988**	**221,150**	**57,077**	**49,036**	**148,884**	**924,854**
Total loans and advances	**217,214**	**278,280**	**226,338**	**63,405**	**56,869**	**187,630**	**1,029,736**
Deposits by banks	**23,133**	**16,963**	**4,002**	**8,830**	**4,707**	**9,087**	**66,722**
Customer accounts	**430,866**	**422,087**	**312,052**	**112,399**	**63,032**	**229,867**	**1,570,303**
Total deposits	**453,999**	**439,050**	**316,054**	**121,229**	**67,739**	**238,954**	**1,637,025**

	At						
	31 Dec 2021						
$m	USD	GBP	HKD	EUR	CNY	Others[1]	Total
Loans and advances to banks	21,474	3,991	524	3,970	6,545	46,632	83,136
Loans and advances to customers	169,055	280,909	223,714	83,457	44,093	244,586	1,045,814
Total loans and advances	190,529	284,900	224,238	87,427	50,638	291,218	1,128,950
Deposits by banks	37,962	20,909	2,757	24,393	5,049	10,082	101,152
Customer accounts	453,864	463,232	318,702	133,604	65,052	276,120	1,710,574
Total deposits	491,826	484,141	321,459	157,997	70,101	286,202	1,811,726

1 *'Others' includes items with no currency information available ($1,519m for loans to banks (2021: $11,028m), $3,405m for loans to customers (2021: $64,491m), $13m for deposits by banks (2021: $23m) and $6m for customer accounts (2021: $5m)).*

RWAs by currency

	At						
	31 Dec 2022						
$m	**USD**	**GBP**	**HKD**	**EUR**	**CNY**	**Others**	**Total**
RWAs[1]	**223,657**	**143,474**	**152,804**	**60,843**	**49,867**	**209,075**	**839,720**

	At						
	31 Dec 2021						
$m	USD	GBP	HKD	EUR	CNY	Others	Total
RWAs	216,664	150,130	145,851	67,934	55,343	202,341	838,263

1 *RWAs of $840bn includes credit risk, market risk and operational risk RWAs.*

Global businesses and geographical regions

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Summary

The Group Chief Executive, supported by the rest of the Group Executive Committee ('GEC'), reviews operating activity on a number of bases, including by global business and geographical region. Our global businesses – Wealth and Personal Banking, Commercial Banking, and Global Banking and Markets – along with Corporate Centre are our reportable segments under IFRS 8 'Operating Segments' and are presented below and in Note 10: Segmental analysis on page 360.

Geographical information is classified by the location of the principal operations of the subsidiary or, for The Hongkong and Shanghai Banking Corporation Limited, HSBC Bank plc, HSBC UK Bank plc, HSBC Bank Middle East Limited and HSBC Bank USA, by the location of the branch responsible for reporting the results or providing funding.

The expense of the UK bank levy is included in the Europe geographical region as HSBC regards the levy as a cost of being headquartered in the UK. From 2021, the UK bank levy was partially allocated to global businesses, which was previously retained in Corporate Centre. Comparative periods have not been re-presented.

The results of geographical regions are presented on a reported basis on page 117 and an adjusted basis on page 119.

Reconciliation of reported and adjusted items – global businesses

Supplementary unaudited analysis of significant items by global business is presented below.

	2022				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	22,197	16,197	15,267	(1,934)	51,727
Significant items	2,170	18	92	1,338	3,618
– customer redress programmes	(10)	2	—	—	(8)
– disposals, acquisitions and investment in new businesses[2]	2,274	—	—	525	2,799
– fair value movements on financial instruments[3]	5	2	(93)	665	579
– restructuring and other related costs[4]	(99)	14	185	148	248
Adjusted	24,367	16,215	15,359	(596)	55,345
ECL					
Reported	(1,137)	(1,858)	(587)	(10)	(3,592)
Adjusted	(1,137)	(1,858)	(587)	(10)	(3,592)
Operating expenses					
Reported	(15,049)	(6,893)	(9,579)	(1,809)	(33,330)
Significant items	323	251	254	2,036	2,864
– customer redress programmes	(37)	—	—	6	(31)
– disposals, acquisitions and investment in new businesses	2	—	—	16	18
– impairment of goodwill and other intangibles	—	(13)	—	9	(4)
– restructuring and other related costs	358	264	254	2,005	2,881
Adjusted	(14,726)	(6,642)	(9,325)	227	(30,466)
Share of profit/(loss) in associates and joint ventures					
Reported	29	1	(2)	2,695	2,723
Adjusted	29	1	(2)	2,695	2,723
Profit/(loss) before tax					
Reported	6,040	7,447	5,099	(1,058)	17,528
Significant items	2,493	269	346	3,374	6,482
– revenue	2,170	18	92	1,338	3,618
– operating expenses	323	251	254	2,036	2,864
Adjusted	8,533	7,716	5,445	2,316	24,010
Loans and advances to customers (net)					
Reported	423,553	308,094	192,852	355	924,854
Adjusted	423,553	308,094	192,852	355	924,854
Customer accounts					
Reported	779,310	458,714	331,844	435	1,570,303
Adjusted	779,310	458,714	331,844	435	1,570,303

1 Net operating income/(expense) before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Includes losses from classifying businesses as held for sale as part of a broader restructuring of our European business, of which $2.4bn relates to the planned sale of our retail banking operations in France.
3 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
4 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2021				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	22,117	13,431	14,588	(584)	49,552
Currency translation	(1,152)	(885)	(987)	(50)	(3,074)
Significant items	(2)	(8)	381	171	542
– customer redress programmes	7	(18)	—	—	(11)
– fair value movements on financial instruments[2]	—	(1)	19	224	242
– restructuring and other related costs[3]	(14)	3	395	(77)	307
– currency translation on significant items	5	8	(33)	24	4
Adjusted	20,963	12,538	13,982	(463)	47,020
ECL					
Reported	288	300	337	3	928
Currency translation	(75)	(75)	(24)	—	(174)
Adjusted	213	225	313	3	754
Operating expenses					
Reported	(16,306)	(7,055)	(10,203)	(1,056)	(34,620)
Currency translation	914	429	781	57	2,181
Significant items	903	72	172	1,188	2,335
– customer redress programmes	39	1	—	9	49
– impairment of goodwill and other intangibles	587	—	—	—	587
– restructuring and other related costs	296	81	197	1,262	1,836
– currency translation on significant items	(19)	(10)	(25)	(83)	(137)
Adjusted	(14,489)	(6,554)	(9,250)	189	(30,104)
Share of profit in associates and joint ventures					
Reported	34	1	—	3,011	3,046
Currency translation	—	—	—	(113)	(113)
Adjusted	34	1	—	2,898	2,933
Profit/(loss) before tax					
Reported	6,133	6,677	4,722	1,374	18,906
Currency translation	(313)	(531)	(230)	(106)	(1,180)
Significant items	901	64	553	1,359	2,877
– revenue	(2)	(8)	381	171	542
– operating expenses	903	72	172	1,188	2,335
Adjusted	6,721	6,210	5,045	2,627	20,603
Loans and advances to customers (net)					
Reported	488,786	349,126	207,162	740	1,045,814
Currency translation	(27,739)	(18,443)	(8,383)	(52)	(54,617)
Adjusted	461,047	330,683	198,779	688	991,197
Customer accounts					
Reported	859,029	506,688	344,205	652	1,710,574
Currency translation	(39,710)	(26,487)	(21,770)	(60)	(88,027)
Adjusted	819,319	480,201	322,435	592	1,622,547

1 Net operating income/(expense) before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
3 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2020				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	21,999	13,294	14,994	142	50,429
Currency translation	(532)	(423)	(581)	13	(1,523)
Significant items	14	18	283	(373)	(58)
– customer redress programmes	5	16	—	—	21
– disposals, acquisitions and investment in new businesses	9	—	—	1	10
– fair value movements on financial instruments[2]	—	1	2	(267)	(264)
– restructuring and other related costs[3]	—	1	307	(138)	170
– currency translation on significant items	—	—	(26)	31	5
Adjusted	21,481	12,889	14,696	(218)	48,848
ECL					
Reported	(2,855)	(4,754)	(1,209)	1	(8,817)
Currency translation	(23)	44	(18)	(1)	2
Adjusted	(2,878)	(4,710)	(1,227)	—	(8,815)
Operating expenses					
Reported	(15,446)	(6,900)	(10,169)	(1,917)	(34,432)
Currency translation	498	230	400	42	1,170
Significant items	412	195	874	1,336	2,817
– customer redress programmes	(64)	1	—	9	(54)
– impairment of goodwill and other intangibles	294	45	577	174	1,090
– past service costs of guaranteed minimum pension benefits equalisation	—	—	—	17	17
– restructuring and other related costs[4]	192	165	326	1,225	1,908
– settlements and provisions in connection with legal and regulatory matters	—	—	2	10	12
– currency translation on significant items	(10)	(16)	(31)	(99)	(156)
Adjusted	(14,536)	(6,475)	(8,895)	(539)	(30,445)
Share of profit/(loss) in associates and joint ventures					
Reported	6	(1)	—	1,592	1,597
Currency translation	—	—	—	48	48
Significant items	—	—	—	462	462
– impairment of goodwill[5]	—	—	—	462	462
– currency translation on significant items	—	—	—	—	—
Adjusted	6	(1)	—	2,102	2,107
Profit/(loss) before tax					
Reported	3,704	1,639	3,616	(182)	8,777
Currency translation	(57)	(149)	(199)	102	(303)
Significant items	426	213	1,157	1,425	3,221
– revenue	14	18	283	(373)	(58)
– operating expenses	412	195	874	1,336	2,817
– share of profit in associates and joint ventures	—	—	—	462	462
Adjusted	4,073	1,703	4,574	1,345	11,695
Loans and advances to customers (net)					
Reported	469,186	343,182	224,364	1,255	1,037,987
Currency translation	(33,081)	(23,098)	(12,854)	(104)	(69,137)
Adjusted	436,105	320,084	211,510	1,151	968,850
Customer accounts					
Reported	834,759	470,428	336,983	610	1,642,780
Currency translation	(46,716)	(30,539)	(26,226)	(70)	(103,551)
Adjusted	788,043	439,889	310,757	540	1,539,229

1 *Net operating income/(expense) before change in expected credit losses and other credit impairment charges, also referred to as revenue.*
2 *Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.*
3 *Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.*
4 *Includes impairment of software intangible assets of $189m (of the total software intangible asset impairment of $1,347m) and impairment of tangible assets of $197m.*
5 *In 2020, The Saudi British Bank ('SABB'), an associate of HSBC, impaired the goodwill that arose following the merger with Alawwal Bank in 2019. HSBC's post-tax share of the goodwill impairment was $462m.*

Reconciliation of reported and adjusted risk-weighted assets

	At 31 Dec 2022				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$bn	$bn	$bn	$bn	$bn
Risk-weighted assets					
Reported	**182.9**	**334.8**	**233.5**	**88.5**	**839.7**
Adjusted[1]	**182.9**	**334.8**	**233.5**	**88.5**	**839.7**
	At 31 Dec 2021				
Risk-weighted assets					
Reported	178.3	332.9	236.2	90.9	838.3
Currency translation	(8.2)	(19.6)	(9.3)	(1.6)	(38.7)
Adjusted[1]	170.1	313.3	226.9	89.3	799.6
	At 31 Dec 2020				
Risk-weighted assets					
Reported	172.8	327.7	265.1	91.9	857.5
Currency translation	(10.2)	(24.2)	(13.5)	(2.7)	(50.6)
Adjusted[1]	162.6	303.5	251.6	89.2	806.9

1 *Adjusted risk-weighted assets are calculated using reported risk-weighted assets adjusted for the effects of currency translation differences and significant items.*

Supplementary tables for WPB and GBM

WPB adjusted performance by business unit

A breakdown of WPB by business unit is presented below to reflect the basis of how the revenue performance of the business units is assessed and managed.

WPB – summary (adjusted basis)

		Consists of[1]			
	Total WPB	Banking operations	Insurance manufacturing	Global Private Banking	Asset management
	$m	$m	$m	$m	$m
2022					
Net operating income before change in expected credit losses and other credit impairment charges[2]	**24,367**	**19,342**	**1,914**	**1,978**	**1,133**
– net interest income	**18,137**	**14,791**	**2,406**	**946**	**(6)**
– net fee income/(expense)	**5,030**	**3,848**	**(701)**	**776**	**1,107**
– other income	**1,200**	**703**	**209**	**256**	**32**
ECL	**(1,137)**	**(1,114)**	**(17)**	**(5)**	**(1)**
Net operating income	**23,230**	**18,228**	**1,897**	**1,973**	**1,132**
Total operating expenses	**(14,726)**	**(11,624)**	**(879)**	**(1,399)**	**(824)**
Operating profit	**8,504**	**6,604**	**1,018**	**574**	**308**
Share of profit in associates and joint ventures	**29**	**11**	**18**	**—**	**—**
Profit before tax	**8,533**	**6,615**	**1,036**	**574**	**308**
2021					
Net operating income before change in expected credit losses and other credit impairment charges[2]	20,963	15,519	2,547	1,746	1,151
– net interest income	13,458	10,585	2,255	620	(2)
– net fee income/(expense)	5,649	4,236	(599)	901	1,111
– other income	1,856	698	891	225	42
ECL	213	219	(18)	13	(1)
Net operating income	21,176	15,738	2,529	1,759	1,150
Total operating expenses	(14,489)	(11,660)	(564)	(1,491)	(774)
Operating profit	6,687	4,078	1,965	268	376
Share of profit in associates and joint ventures	34	17	17	—	—
Profit before tax	6,721	4,095	1,982	268	376

WPB – summary (adjusted basis) (continued)

	Total WPB	Consists of[1] Banking operations	Insurance manufacturing	Global Private Banking	Asset management
	$m	$m	$m	$m	$m
2020					
Net operating income before change in expected credit losses and other credit impairment charges[2]	21,481	16,925	1,834	1,712	1,010
– net interest income	14,752	11,904	2,189	661	(2)
– net fee income/(expense)	5,306	4,027	(505)	813	971
– other income	1,423	994	150	238	41
ECL	(2,878)	(2,746)	(63)	(68)	(1)
Net operating income	18,603	14,179	1,771	1,644	1,009
Total operating expenses	(14,536)	(12,010)	(463)	(1,359)	(704)
Operating profit	4,067	2,169	1,308	285	305
Share of profit in associates and joint ventures	6	6	—	—	—
Profit before tax	4,073	2,175	1,308	285	305

1 *The results presented for insurance manufacturing operations are shown before elimination of inter-company transactions with HSBC non-insurance operations. These eliminations are presented within Banking operations.*
2 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue. This may differ from the WPB Life insurance manufacturing revenue shown in the managed view of adjusted revenue on page 32, which excludes the impact of Argentina hyperinflation.*

WPB insurance manufacturing adjusted results

The following table shows the results of our insurance manufacturing operations by income statement line item. It shows the results of insurance manufacturing operations for WPB and for all global business segments in aggregate, and separately the insurance distribution income earned by HSBC bank channels.

These results are prepared in accordance with current IFRSs, which will change following the adoption of IFRS 17 'Insurance Contracts', effective from 1 January 2023. Further information about the adoption of IFRS 17 is provided on page 99.

Adjusted results of insurance manufacturing operations and insurance distribution income earned by HSBC bank channels[1,2]

	2022		2021		2020	
	WPB	**All global businesses**	WPB	All global businesses	WPB	All global businesses
	$m	**$m**	$m	$m	$m	$m
Net interest income	**2,406**	**2,595**	2,255	2,430	2,189	2,352
Net fee income/(expense)	**(701)**	**(724)**	(599)	(629)	(505)	(541)
– fee income	**140**	**159**	100	123	108	129
– fee expense	**(841)**	**(883)**	(699)	(752)	(613)	(670)
Net income/(expenses) from financial instruments held for trading or managed on a fair value basis	**95**	**94**	(4)	(12)	60	76
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	**(3,411)**	**(3,413)**	3,867	3,903	1,903	1,853
Gains less losses from financial investments	**(12)**	**(12)**	85	89	12	12
Net insurance premium income	**12,413**	**12,942**	10,145	10,617	9,522	10,005
Other operating income	**504**	**453**	164	148	329	342
– of which: PVIF	***369***	***324***	*76*	*69*	*365*	*377*
Total operating income	**11,294**	**11,935**	15,913	16,546	13,510	14,100
Net insurance claims and benefits paid and movement in liabilities to policyholders	**(9,380)**	**(9,929)**	(13,366)	(13,863)	(11,676)	(12,166)
Net operating income before change in expected credit losses and other credit impairment charges[3]	**1,914**	**2,006**	2,547	2,683	1,834	1,934
Change in expected credit losses and other credit impairment charges	**(17)**	**(18)**	(18)	(22)	(63)	(72)
Net operating income	**1,897**	**1,988**	2,529	2,661	1,771	1,862
Total operating expenses	**(879)**	**(918)**	(564)	(590)	(463)	(492)
Operating profit	**1,018**	**1,070**	1,965	2,071	1,308	1,370
Share of profit in associates and joint ventures	**18**	**18**	17	17	—	—
Profit before tax of insurance manufacturing operations[4]	**1,036**	**1,088**	1,982	2,088	1,308	1,370
Annualised new business premiums of insurance manufacturing operations	**2,295**	**2,354**	2,777	2,830	2,272	2,333
Insurance distribution income earned by HSBC bank channels	**764**	**823**	726	795	718	781

1 *Adjusted results are derived by adjusting for year-on-year effects of foreign currency translation differences, and the effect of significant items that distort year-on-year comparisons. There are no significant items included within insurance manufacturing, and the impact of foreign currency translation on all global businesses' profit before tax is 2021: $53m unfavourable (reported: $2,141m), 2020: $7m unfavourable (reported: $1,377m).*
2 *The results presented for insurance manufacturing operations are shown before elimination of inter-company transactions with HSBC non-insurance operations.*
3 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*
4 *The effect on the insurance manufacturing operations of applying hyperinflation accounting in Argentina resulted in a decrease in adjusted revenue in 2022 of $3m (2021: increase of $6m, 2020: increase of $1m) and a decrease in profit before tax in 2022 of $2m (2021: increase of $5m, 2020: increase of $13m). These effects are recorded within 'All global businesses'.*

Insurance manufacturing

The following commentary, unless otherwise specified, relates to the 'All global businesses' results.

HSBC recognises the present value of long-term in-force insurance contracts and investment contracts with discretionary participation features ('PVIF') as an asset on the balance sheet. The overall balance sheet equity, including PVIF, is therefore a measure of the embedded value in the insurance manufacturing entities, and the movement in this embedded value in the period drives the overall income statement result.

Adjusted profit before tax of $1.1bn decreased by $1.0bn or 48% compared with 2021.

Adjusted net operating income before change in expected credit losses and other credit impairment changes was $2.0bn or 25% lower than in 2021. This reflected the following:

- 'Net expense from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss' of $3.4bn in 2022 compared with a net income of $3.9bn in 2021. This decrease primarily reflected unfavourable equity market performance impacting our Hong Kong and France businesses in 2022, compared with favourable market performances in 2021.
- This unfavourable movement resulted in a corresponding movement in liabilities to policyholders and PVIF (see 'Other operating income' below), to the extent to which policyholders and shareholders respectively participate in the investment performance of the associated assets.
- Net insurance premium income of $12.9bn was $2.3bn higher than in 2021, primarily reflecting higher sales volumes, particularly in Hong Kong which had a higher proportion of single premium products in its product mix, and in Singapore following the acquisition of AXA Insurance Pte Limited ('AXA Singapore') during 2022.
- Other operating income of $0.5bn increased by $0.3bn compared with 2021. This reflected increases in Hong Kong of $0.2bn from the value of new business, a $0.5bn favourable impact from sharing lower investment returns with policyholders, a $0.3bn one-off gain from a pricing update for policyholder funds held on deposit with us in Hong Kong to reflect the cost of provision of these services, and a $0.1bn gain on completion of our acquisition of AXA Singapore in 2022. These were partly offset by a $0.7bn reduction from PVIF assumption changes primarily in Hong Kong, reflecting the impact of higher interest rates.
- Net insurance claims and benefits paid and movement in liabilities to policyholders of $9.9bn were $3.9bn lower, primarily due to a decline in returns on financial assets supporting contracts where the policyholder is subject to part or all of the investment risk, mainly in France and Hong Kong. It also reflected higher sales volumes in Hong Kong.

Total operating expenses of $0.9bn increased by $0.3bn compared with 2021, reflecting the incorporation of the results of AXA Singapore in 2022 and investment in our Pinnacle proposition in mainland China.

Annualised new business premiums ('ANP') is used to assess new insurance premium generation by the business. It is calculated as 100% of annualised first year regular premiums and 10% of single premiums, before reinsurance ceded. Lower ANP in the year mainly reflect a change in product mix in Hong Kong towards single premium new business, partially offset by higher ANP from business growth in mainland China and the inclusion of the results of AXA Singapore.

Insurance distribution income from HSBC channels included $503m (2021: $469m; 2020: $460m) from HSBC manufactured products, for which a corresponding fee expense is recognised within insurance manufacturing, and $320m (2021: $326m; 2020: $321m) from products manufactured by third-party providers. The WPB component of this distribution income was $461m (2021: $417m; 2020: $413m) from HSBC manufactured products and $303m (2021: $309m; 2020: $305m) from third-party products.

WPB: Wealth adjusted revenue by geography

The following table shows the adjusted revenue of our Wealth business by region. Our Wealth business comprises investment distribution, life insurance manufacturing, Global Private Banking and Asset Management.

Wealth adjusted revenue by geography

	2022	2021	2020
	$m	$m	$m
Europe	**2,456**	2,152	1,666
Asia	**4,549**	5,701	5,199
MENA	**198**	165	148
North America	**581**	522	513
Latin America	**307**	243	211
Total	**8,091**	8,783	7,737

WPB: Wealth balances

The following table shows the wealth balances, which include invested assets and wealth deposits. Invested assets comprise customer assets either managed by our Asset Management business or by external third-party investment managers, as well as self-directed investments by our customers.

WPB – reported wealth balances[1]

	2022 $bn	2021 $bn
Global Private Banking invested assets	**312**	351
– managed by Global Asset Management	**57**	67
– external managers, direct securities and other	**255**	284
Retail invested assets	**364**	434
– managed by Global Asset Management	**198**	229
– external managers, direct securities and other	**166**	205
Asset Management third-party distribution	**340**	334
Reported invested assets[1]	**1,016**	1,119
Wealth deposits (Premier, Jade and Global Private Banking)[2]	**503**	551
Total reported wealth balances	**1,519**	1,670

1 *Invested assets are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager. At 31 December 2022, $31bn of invested assets were classified as held for sale and are not included in the table above.*

2 *Premier, Jade and Global Private Banking deposits, which include Prestige deposits in Hang Seng Bank, form part of the total WPB customer accounts balance of $779bn (2021: $859bn) on page 109. At 31 December 2022, $42bn of wealth deposits were classified as held for sale and are not included in the table above.*

Asset Management: funds under management

The following table shows the funds under management of our Asset Management business. Funds under management represents assets managed, either actively or passively, on behalf of our customers.

Funds under management are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager.

Asset Management – reported funds under management[1]

	2022 $bn	2021 $bn
Opening balance	**630**	602
Net new invested assets	**45**	27
Net market movements	**(36)**	18
Foreign exchange and others	**(44)**	(17)
Closing balance	**595**	630

Asset Management – reported funds under management by geography

	2022 $bn	2021 $bn
Europe	**327**	367
Asia	**196**	180
MENA	**2**	5
North America	**60**	69
Latin America	**10**	9
Closing balance	**595**	630

1 *Funds under management are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager.*

At 31 December 2022, Asset Management funds under management amounted to $595bn, a decrease of $35bn or 6%. The decrease reflected adverse market performance and foreign exchange translation, which more than offset strong net new invested assets of $45bn received in 2022. Within 'foreign exchange and others' is a $14bn reduction related to the reclassification to held for sale of our banking operations in Canada, which we continue to manage but are no longer considered part of our core funds under management. This was partly offset by an increase of $9bn due to the acquisition of L&T Investment Management. Net new invested assets were notably from additions in passive, private equity and money market products.

Global Private Banking: client assets[1]

Global Private Banking client assets comprises invested assets and deposits, which are translated at the rates of exchange applicable for their respective year-ends, with the effects of currency translation reported separately.

Global Private Banking – reported client assets[2]

	2022 $bn	2021 $bn
Opening balance	**423**	394
Net new invested assets	**18**	19
Increase/(decrease) in deposits	**(1)**	4
Net market movements	**(53)**	17
Foreign exchange and others	**(4)**	(11)
Closing Balance	**383**	423

Global Private Banking – reported client assets by geography

	2022 $bn	2021 $bn
Europe	**153**	174
Asia	**174**	178
North America	**56**	71
Closing balance	**383**	423

1 *Client assets are translated at the rates of exchange applicable for their respective period-ends, with the effects of currency translation reported separately.*
2 *Client assets are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager. Customer deposits included in these client assets are on balance sheet.*

Retail invested assets

The following table shows the invested assets of our retail customers. These comprise customer assets either managed by our Asset Management business or by external third-party investment managers as well as self-directed investments by our customers. Retail invested assets are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager.

Retail invested assets

	2022 $bn	2021 $bn
Opening balance	**434**	407
Net new invested assets[1]	**26**	26
Net market movements	**(46)**	5
Foreign exchange and others	**(50)**	(4)
Closing balance	**364**	434

Retail invested assets by geography

	2022 $bn	2021 $bn
Europe	**54**	81
Asia	**285**	293
MENA	**5**	4
North America	**12**	47
Latin America	**8**	9
Closing balance	**364**	434

1 *'Retail net new invested assets' covers nine markets, comprising Hong Kong including Hang Seng Bank (Hong Kong), mainland China, Malaysia, Singapore, HSBC Bank UK, UAE, US, Canada and Mexico. The net new invested assets related to all other geographies is reported in 'exchange and other'.*

WPB invested assets

Net new invested assets represents the net customer inflows from retail invested assets, Asset Management third-party distribution and Global Private Banking invested assets. It excludes all customer deposits. The net new invested assets in the table below is non-additive from the tables above, as net new invested assets managed by Asset Management that are generated by retail clients or Global Private Banking will be recorded in both businesses.

WPB: Invested assets

	2022 $bn	2021 $bn
Opening balance	**1,119**	1,050
Net new invested assets	**80**	64
Net market movements	**(116)**	33
Foreign exchange and others	**(67)**	(28)
Closing balance	**1,016**	1,119

WPB: Net new invested assets by geography

	2022 $bn	2021 $bn
Europe	**13**	17
Asia	**59**	36
MENA	**—**	—
North America	**7**	10
Latin America	**1**	1
Total	**80**	64

GBM: Securities Services and Issuer Services

Assets held in custody

Custody is the safekeeping and servicing of securities and other financial assets on behalf of clients. Assets held in custody are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager. At 31 December 2022, we held $9.1tn of assets as custodian, a reduction of 15% compared with 31 December 2021. The balance comprised $8.4tn of assets in Securities Services, which were recorded at market value, and $0.8tn of assets in Issuer Services, recorded at book value.

The reduction was mainly in Securities Services balances. This was driven by an adverse impact of currency translation differences in Europe and Asia, and adverse market movements, notably impacting Asia and the US. In addition, there was a net outflow of assets in Asia and Europe.

Assets under administration

Our assets under administration business, which includes the provision of bond and loan administration services, transfer agency services and the valuation of portfolios of securities and other financial assets on behalf of clients, complements the custody business. At 31 December 2022, the value of assets held under administration by the Group amounted to $4.5tn, which was 9% lower than at 31 December 2021. The balance comprised $2.6tn of assets in Securities Services, which were recorded at market value, and $1.8tn of assets in Issuer Services, recorded at book value.

The decrease was mainly driven by Securities Services balances due to an adverse impact of currency translation differences in Europe, a net outflow of assets, mainly in Asia and Europe, and adverse market movements in Europe and Asia. These decreases were partly offset by an inflow of assets from new customers in Europe.

Analysis of reported results by geographical regions

HSBC reported profit/(loss) before tax and balance sheet data

	2022						
	Europe	Asia	MENA	North America	Latin America	Intra-HSBC	Total
	$m	$m	$m	$m	$m	$m	$m
Net interest income	7,185	16,157	1,665	3,395	2,754	1,454	32,610
Net fee income	3,554	4,695	830	1,824	547	1	11,451
Net income from financial instruments held for trading or managed on a fair value basis	3,242	5,329	578	587	756	(23)	10,469
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit and loss	(1,760)	(1,683)	—	—	48	1	(3,394)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	1,639	4	2	(8)	20	(1,431)	226
Other income/(expense)[1]	3,046	4,297	(138)	630	(317)	(7,153)	365
Net operating income before change in expected credit losses and other credit impairment charges[2]	16,906	28,799	2,937	6,428	3,808	(7,151)	51,727
Change in expected credit losses and other credit impairment charges	(857)	(2,089)	8	(93)	(561)	—	(3,592)
Net operating income	16,049	26,710	2,945	6,335	3,247	(7,151)	48,135
Total operating expenses excluding impairment of goodwill and other intangible assets	(16,370)	(15,343)	(1,582)	(4,639)	(2,401)	7,152	(33,183)
Impairment of goodwill and other intangible assets	(54)	(52)	(5)	(30)	(5)	(1)	(147)
Operating profit/(loss)	(375)	11,315	1,358	1,666	841	—	14,805
Share of profit/(loss) in associates and joint ventures	(40)	2,409	342	—	12	—	2,723
Profit/(loss) before tax	(415)	13,724	1,700	1,666	853	—	17,528
	%	%	%	%	%		%
Share of HSBC's profit before tax	(2.4)	78.3	9.7	9.5	4.9		100.0
Cost efficiency ratio	97.1	53.5	54.0	72.6	63.2		64.4
Balance sheet data	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers (net)	343,670	475,278	26,475	55,790	23,641	—	924,854
Total assets	1,345,971	1,316,876	70,755	341,125	51,708	(159,905)	2,966,530
Customer accounts	601,473	784,236	43,933	109,093	31,568	—	1,570,303
Risk-weighted assets[3]	251,195	409,320	60,946	106,546	38,904		839,720

HSBC reported profit/(loss) before tax and balance sheet data (continued)

	2021						
	Europe $m	Asia $m	MENA $m	North America $m	Latin America $m	Intra-HSBC items $m	Total $m
Net interest income	6,454	12,596	1,299	2,845	2,195	1,100	26,489
Net fee income	3,882	5,871	774	2,056	514	—	13,097
Net income from financial instruments held for trading or managed on a fair value basis	2,602	3,643	431	426	476	166	7,744
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit and loss	1,670	2,340	—	—	45	(2)	4,053
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	1,973	(3)	(3)	54	40	(1,263)	798
Other income/(expense)[1]	3,523	1,316	59	673	(212)	(7,988)	(2,629)
Net operating income before change in expected credit losses and other credit impairment charges[2]	20,104	25,763	2,560	6,054	3,058	(7,987)	49,552
Change in expected credit losses and other credit impairment charges	1,601	(840)	132	238	(203)	—	928
Net operating income	21,705	24,923	2,692	6,292	2,855	(7,987)	50,480
Total operating expenses excluding impairment of goodwill and other intangible assets	(18,099)	(15,136)	(1,536)	(4,905)	(2,198)	7,987	(33,887)
Impairment of goodwill and other intangible assets	(95)	(24)	(8)	(13)	(593)	—	(733)
Operating profit/(loss)	3,511	9,763	1,148	1,374	64	—	15,860
Share of profit/(loss) in associates and joint ventures	268	2,486	275	—	17	—	3,046
Profit/(loss) before tax	3,779	12,249	1,423	1,374	81	—	18,906
	%	%	%	%	%		%
Share of HSBC's profit before tax	20.0	64.8	7.5	7.3	0.4		100.0
Cost efficiency ratio	90.5	58.8	60.3	81.2	91.3		69.9
Balance sheet data	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers (net)	397,090	492,525	26,375	108,717	21,107	—	1,045,814
Total assets	1,354,483	1,261,707	70,974	362,150	46,602	(137,977)	2,957,939
Customer accounts	667,769	792,098	42,629	178,565	29,513	—	1,710,574
Risk-weighted assets[3]	261,115	396,206	60,223	110,412	35,915	—	838,263

	2020						
Net interest income	5,695	14,318	1,465	2,836	1,960	1,304	27,578
Net fee income	3,499	5,418	695	1,795	467	—	11,874
Net income from financial instruments held for trading or managed on a fair value basis	3,266	4,273	402	997	593	51	9,582
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit and loss	327	1,699	—	—	55	—	2,081
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	1,747	17	3	2	40	(1,354)	455
Other income/(expense)[1]	3,885	1,197	63	745	(95)	(6,936)	(1,141)
Net operating income before loan impairment (charges)/ recoveries and other credit risk provisions[2]	18,419	26,922	2,628	6,375	3,020	(6,935)	50,429
Change in expected credit losses and other credit impairment (charges)/recoveries	(3,751)	(2,284)	(758)	(900)	(1,124)	—	(8,817)
Net operating income	14,668	24,638	1,870	5,475	1,896	(6,935)	41,612
Total operating expenses excluding impairment of goodwill and other intangible assets	(17,860)	(13,584)	(1,521)	(5,081)	(1,933)	6,935	(33,044)
Impairment of goodwill and other intangible assets	(1,014)	(78)	(65)	(226)	(5)	—	(1,388)
Operating profit/(loss)	(4,206)	10,976	284	168	(42)	—	7,180
Share of profit in associates and joint ventures	1	1,856	(265)	—	5	—	1,597
Profit/(loss) before tax	(4,205)	12,832	19	168	(37)	—	8,777
	%	%	%	%	%		%
Share of HSBC's profit before tax	(47.9)	146.2	0.2	1.9	(0.4)		100.0
Cost efficiency ratio	102.5	50.7	60.4	83.2	64.2		68.3
Balance sheet data	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers (net)	408,495	473,165	28,700	107,969	19,658	—	1,037,987
Total assets	1,416,111	1,206,404	68,860	373,167	49,703	(130,081)	2,984,164
Customer accounts	629,647	762,406	41,221	182,028	27,478	—	1,642,780
Risk-weighted assets[3]	284,322	384,228	60,181	117,755	35,240	—	857,520

1 *'Other income/(expense)' in this context comprises where applicable net income/expense from other financial instruments designated at fair value, gains less losses from financial investments, dividend income, net insurance premium income and other operating income less net insurance claims and benefits paid and movement in liabilities to policyholders.*
2 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*
3 *Risk-weighted assets are non-additive across geographical regions due to market risk diversification effects within the Group.*

Reconciliation of reported and adjusted items – geographical regions

Reconciliation of reported and adjusted items

	2022					
	Europe	Asia	MENA	North America	Latin America	Total
	$m	$m	$m	$m	$m	$m
Revenue[1]						
Reported[2]	16,906	28,799	2,937	6,428	3,808	51,727
Significant items[2]	3,065	(223)	9	(108)	15	3,618
– customer redress programmes	(8)	—	—	—	—	(8)
– disposals, acquisitions and investment in new businesses[3]	2,799	—	—	—	—	2,799
– fair value movements on financial instruments[4]	562	22	(3)	(3)	1	579
– restructuring and other related costs[2,5]	(288)	(245)	12	(105)	14	248
Adjusted[2]	19,971	28,576	2,946	6,320	3,823	55,345
ECL						
Reported	(857)	(2,089)	8	(93)	(561)	(3,592)
Adjusted	(857)	(2,089)	8	(93)	(561)	(3,592)
Operating expenses						
Reported[2]	(16,424)	(15,395)	(1,587)	(4,669)	(2,406)	(33,330)
Significant items[2]	2,119	833	73	544	155	2,864
– customer redress programmes	(31)	—	—	—	—	(31)
– disposals, acquisitions and investment in new businesses	18	—	—	—	—	18
– impairment of goodwill and other intangibles	(4)	—	—	—	—	(4)
– restructuring and other related costs[2]	2,136	833	73	544	155	2,881
Adjusted[2]	(14,305)	(14,562)	(1,514)	(4,125)	(2,251)	(30,466)
Share of profit/(loss) in associates and joint ventures						
Reported	(40)	2,409	342	—	12	2,723
Adjusted	(40)	2,409	342	—	12	2,723
Profit/(loss) before tax						
Reported	(415)	13,724	1,700	1,666	853	17,528
Significant items	5,184	610	82	436	170	6,482
– revenue[2]	3,065	(223)	9	(108)	15	3,618
– operating expenses[2]	2,119	833	73	544	155	2,864
Adjusted	4,769	14,334	1,782	2,102	1,023	24,010
Loans and advances to customers (net)						
Reported	343,670	475,278	26,475	55,790	23,641	924,854
Adjusted	343,670	475,278	26,475	55,790	23,641	924,854
Customer accounts						
Reported	601,473	784,236	43,933	109,093	31,568	1,570,303
Adjusted	601,473	784,236	43,933	109,093	31,568	1,570,303

1 Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Amounts are non-additive across geographical regions due to inter-company transactions within the Group.
3 Includes losses from classifying businesses as held for sale as part of a broader restructuring of our European business, of which $2.4bn relates to the planned sale of our retail banking operations in France.
4 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
5 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2022				
	UK	Hong Kong	Mainland China	US	Mexico
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	17,353	16,155	4,246	4,107	2,749
Significant items	215	163	(73)	(99)	19
– customer redress programmes	(8)	—	—	—	—
– disposals, acquisitions and investment in new businesses	60	—	—	—	—
– fair value movements on financial instruments[2]	571	39	(1)	(1)	1
– restructuring and other related costs[3]	(408)	124	(72)	(98)	18
Adjusted	17,568	16,318	4,173	4,008	2,768
ECL					
Reported	(712)	(1,680)	(328)	(20)	(507)
Adjusted	(712)	(1,680)	(328)	(20)	(507)
Operating expenses					
Reported	(13,224)	(8,275)	(2,906)	(3,438)	(1,642)
Significant items	1,710	393	70	423	115
– customer redress programmes	(31)	—	—	—	—
– restructuring and other related costs	1,741	393	70	423	115
Adjusted	(11,514)	(7,882)	(2,836)	(3,015)	(1,527)
Share of profit/(loss) in associates and joint ventures					
Reported	(41)	5	2,386	—	12
Adjusted	(41)	5	2,386	—	12
Profit before tax					
Reported	3,376	6,205	3,398	649	612
Significant items	1,925	556	(3)	324	134
– revenue	215	163	(73)	(99)	19
– operating expenses	1,710	393	70	423	115
Adjusted	5,301	6,761	3,395	973	746
Loans and advances to customers (net)					
Reported	286,032	295,873	50,481	54,159	20,446
Adjusted	286,032	295,873	50,481	54,159	20,446
Customer accounts					
Reported	493,028	542,543	56,948	100,404	25,531
Adjusted	493,028	542,543	56,948	100,404	25,531

1 Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
3 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2021					
	Europe	Asia	MENA	North America	Latin America	Total
	$m	$m	$m	$m	$m	$m
Revenue[1]						
Reported[2]	20,104	25,763	2,560	6,054	3,058	49,552
Currency translation[2]	(2,096)	(769)	(224)	(70)	(148)	(3,074)
Significant items[2]	138	(154)	(1)	10	5	542
– customer redress programmes	(11)	—	—	—	—	(11)
– fair value movements on financial instruments[3]	226	11	—	5	—	242
– restructuring and other related costs[2,4]	(90)	(175)	—	5	5	307
– currency translation on significant items[2]	13	10	(1)	—	—	4
Adjusted[2]	18,146	24,840	2,335	5,994	2,915	47,020
ECL						
Reported	1,601	(840)	132	238	(203)	928
Currency translation	(177)	19	(1)	(1)	(14)	(174)
Adjusted	1,424	(821)	131	237	(217)	754
Operating expenses						
Reported[2]	(18,194)	(15,160)	(1,544)	(4,918)	(2,791)	(34,620)
Currency translation[2]	1,645	490	109	43	127	2,181
Significant items[2]	1,234	492	51	429	673	2,335
– customer redress programmes	49	—	—	—	—	49
– impairment of goodwill and other intangibles	—	—	—	—	587	587
– restructuring and other related costs[2]	1,318	509	56	432	83	1,836
– currency translation on significant items[2]	(133)	(17)	(5)	(3)	3	(137)
Adjusted[2]	(15,315)	(14,178)	(1,384)	(4,446)	(1,991)	(30,104)
Share of profit in associates and joint ventures						
Reported	268	2,486	275	—	17	3,046
Currency translation	(23)	(90)	—	—	—	(113)
Adjusted	245	2,396	275	—	17	2,933
Profit before tax						
Reported	3,779	12,249	1,423	1,374	81	18,906
Currency translation	(651)	(350)	(116)	(28)	(35)	(1,180)
Significant items	1,372	338	50	439	678	2,877
– revenue[2]	138	(154)	(1)	10	5	542
– operating expenses[2]	1,234	492	51	429	673	2,335
Adjusted	4,500	12,237	1,357	1,785	724	20,603
Loans and advances to customers (net)						
Reported	397,090	492,525	26,375	108,717	21,107	1,045,814
Currency translation	(38,699)	(11,301)	(1,395)	(3,572)	350	(54,617)
Adjusted	358,391	481,224	24,980	105,145	21,457	991,197
Customer accounts						
Reported	667,769	792,098	42,629	178,565	29,513	1,710,574
Currency translation	(66,300)	(13,859)	(3,686)	(3,826)	(356)	(88,027)
Adjusted	601,469	778,239	38,943	174,739	29,157	1,622,547

1 Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Amounts are non-additive across geographical regions due to inter-company transactions within the Group.
3 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
4 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2021				
	UK	Hong Kong	Mainland China	US	Mexico
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	16,415	14,463	3,734	4,006	2,341
Currency translation	(1,664)	(103)	(159)	(1)	19
Significant items	7	60	(39)	14	15
– customer redress programmes	(11)	—	—	—	—
– fair value movements on financial instruments[2]	220	7	—	5	—
– restructuring and other related costs[3]	(227)	54	(41)	9	15
– currency translation on significant items	25	(1)	2	—	—
Adjusted	14,758	14,420	3,536	4,019	2,375
ECL					
Reported	1,645	(608)	(89)	205	(224)
Currency translation	(182)	3	9	—	(7)
Adjusted	1,463	(605)	(80)	205	(231)
Operating expenses					
Reported	(14,808)	(7,955)	(2,773)	(3,683)	(1,565)
Currency translation	1,292	53	121	—	(20)
Significant items	1,079	226	30	355	66
– customer redress programmes	49	—	—	—	—
– restructuring and other related costs	1,144	227	32	355	59
– currency translation on significant items	(114)	(1)	(2)	—	7
Adjusted	(12,437)	(7,676)	(2,622)	(3,328)	(1,519)
Share of profit in associates and joint ventures					
Reported	267	16	2,461	—	17
Currency translation	(23)	—	(89)	—	—
Adjusted	244	16	2,372	—	17
Profit before tax					
Reported	3,519	5,916	3,333	528	569
Currency translation	(577)	(47)	(118)	(1)	(8)
Significant items	1,086	286	(9)	369	81
– revenue	7	60	(39)	14	15
– operating expenses	1,079	226	30	355	66
Adjusted	4,028	6,155	3,206	896	642
Loans and advances to customers (net)					
Reported	306,464	311,947	54,239	52,678	18,043
Currency translation	(33,683)	111	(4,228)	—	924
Adjusted	272,781	312,058	50,011	52,678	18,967
Customer accounts					
Reported	535,797	549,429	59,266	111,921	23,583
Currency translation	(58,889)	193	(4,620)	—	1,208
Adjusted	476,908	549,622	54,646	111,921	24,791

1 Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
3 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Reconciliation of reported and adjusted items (continued)

	2020					
	Europe	Asia	MENA	North America	Latin America	Total
	$m	$m	$m	$m	$m	$m
Revenue[1]						
Reported[2]	18,419	26,922	2,628	6,375	3,020	50,429
Currency translation[2]	(819)	(412)	(252)	49	(195)	(1,523)
Significant items[2]	(234)	(34)	—	41	—	(58)
– customer redress programmes	21	—	—	—	—	21
– disposals, acquisitions and investment in new businesses	—	—	—	10	—	10
– fair value movements on financial investments[3]	(254)	(5)	—	(2)	(3)	(264)
– restructuring and other related costs[2,4]	(9)	(32)	—	35	—	170
– currency translation on significant items[2]	8	3	—	(2)	3	5
Adjusted[2]	17,366	26,476	2,376	6,465	2,825	48,848
ECL						
Reported	(3,751)	(2,284)	(758)	(900)	(1,124)	(8,817)
Currency translation	45	2	20	(18)	(47)	2
Adjusted	(3,706)	(2,282)	(738)	(918)	(1,171)	(8,815)
Operating expenses						
Reported[2]	(18,874)	(13,662)	(1,586)	(5,307)	(1,938)	(34,432)
Currency translation[2]	756	250	146	(28)	152	1,170
Significant items[2]	2,074	164	75	600	73	2,817
– customer redress programmes	(54)	—	—	—	—	(54)
– impairment of goodwill and other intangibles	803	—	64	223	—	1,090
– past service costs of guaranteed minimum pension benefits equalisation	17	—	—	—	—	17
– restructuring and other related costs[2,5]	1,425	171	19	378	91	1,908
– settlements and provisions in connection with legal and regulatory matters	12	—	—	—	—	12
– currency translation on significant items[2]	(129)	(7)	(8)	(1)	(18)	(156)
Adjusted[2]	(16,044)	(13,248)	(1,365)	(4,735)	(1,713)	(30,445)
Share of profit/(loss) in associates and joint ventures						
Reported	1	1,856	(265)	—	5	1,597
Currency translation	(11)	59	—	—	—	48
Significant items	—	—	462	—	—	462
– impairment of goodwill[6]	—	—	462	—	—	462
– currency translation on significant items	—	—	—	—	—	—
Adjusted	(10)	1,915	197	—	5	2,107
Profit/(loss) before tax						
Reported	(4,205)	12,832	19	168	(37)	8,777
Currency translation	(29)	(101)	(86)	3	(90)	(303)
Significant items	1,840	130	537	641	73	3,221
– revenue[2]	(234)	(34)	—	41	—	(58)
– operating expenses[2]	2,074	164	75	600	73	2,817
– share of profit in associates and joint ventures	—	—	462	—	—	462
Adjusted	(2,394)	12,861	470	812	(54)	11,695
Loans and advances to customers (net)						
Reported	408,495	473,165	28,700	107,969	19,658	1,037,987
Currency translation	(48,299)	(14,753)	(2,814)	(2,974)	(297)	(69,137)
Adjusted	360,196	458,412	25,886	104,995	19,361	968,850
Customer accounts						
Reported	629,647	762,406	41,221	182,028	27,478	1,642,780
Currency translation	(74,348)	(19,820)	(4,466)	(3,505)	(1,412)	(103,551)
Adjusted	555,299	742,586	36,755	178,523	26,066	1,539,229

1 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*
2 *Amounts are non-additive across geographical regions due to inter-company transactions within the Group.*
3 *Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.*
4 *Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.*
5 *Includes impairment of software intangible assets of $189m (of total software intangible asset impairment of $1,347m) and impairment of tangible assets of $197m.*
6 *In 2020, The Saudi British Bank ('SABB'), an associate of HSBC, impaired the goodwill that arose following the merger with Alawwal bank in 2019. HSBC's post-tax share of the goodwill impairment was $462m.*

Reconciliation of reported and adjusted items (continued)

	2020				
	UK	Hong Kong	Mainland China	US	Mexico
	$m	$m	$m	$m	$m
Revenue[1]					
Reported	13,886	16,345	3,088	4,590	2,234
Currency translation	(540)	(145)	90	(1)	141
Significant items	(187)	14	(5)	40	(12)
– customer redress programmes	21	—	—	—	—
– disposals, acquisitions and investment in new businesses	—	—	—	10	—
– fair value movements on financial instruments[2]	(256)	—	(1)	(2)	(1)
– restructuring and other related costs[3]	48	15	(4)	33	(12)
– currency translation on significant items	—	(1)	—	(1)	1
Adjusted	13,159	16,214	3,173	4,629	2,363
ECL					
Reported	(3,256)	(824)	(114)	(622)	(1,050)
Currency translation	30	9	(10)	—	(77)
Adjusted	(3,226)	(815)	(124)	(622)	(1,127)
Operating expenses					
Reported	(14,855)	(7,312)	(2,211)	(4,194)	(1,376)
Currency translation	438	62	(49)	—	(89)
Significant items	1,275	98	18	556	44
– customer redress programmes	(54)	—	—	—	—
– impairment of goodwill and other intangibles	650	—	—	223	—
– past service costs of guaranteed minimum pension benefits equalisation	17	—	—	—	—
– restructuring and other related costs	693	100	19	333	42
– settlements and provisions in connection with legal and regulatory matters	12	—	—	—	—
– currency translation on significant items	(43)	(2)	(1)	—	2
Adjusted	(13,142)	(7,152)	(2,242)	(3,638)	(1,421)
Share of profit/(loss) in associates and joint ventures					
Reported	1	(2)	1,849	—	5
Currency translation	(10)	—	58	—	—
Adjusted	(9)	(2)	1,907	—	5
Profit/(loss) before tax					
Reported	(4,224)	8,207	2,612	(226)	(187)
Currency translation	(82)	(74)	89	(1)	(25)
Significant items	1,088	112	13	596	32
– revenue	(187)	14	(5)	40	(12)
– operating expenses	1,275	98	18	556	44
Adjusted	(3,218)	8,245	2,714	369	(180)
Loans and advances to customers (net)					
Reported	314,530	302,454	46,113	58,082	17,296
Currency translation	(37,030)	(1,635)	(2,417)	—	391
Adjusted	277,500	300,819	43,696	58,082	17,687
Customer accounts					
Reported	504,275	531,489	56,826	117,485	22,220
Currency translation	(59,369)	(2,873)	(2,978)	—	503
Adjusted	444,906	528,616	53,848	117,485	22,723

1 Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.
2 Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.
3 Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.

Analysis by country

Profit/(loss) before tax by country/territory within global businesses

	2022				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Europe	(95)	2,652	(77)	(2,895)	(415)
– UK[1]	1,853	2,094	(534)	(37)	3,376
– *of which: HSBC UK Bank plc (ring-fenced bank)*	*2,112*	*2,662*	*143*	*(430)*	*4,487*
– *of which: HSBC Bank plc (non-ring-fenced bank)*	*386*	*315*	*141*	*(474)*	*368*
– *of which: Holdings and other*	*(645)*	*(883)*	*(818)*	*867*	*(1,479)*
– France[2]	(2,016)	210	81	(268)	(1,993)
– Germany	17	8	133	(147)	11
– Switzerland	25	17	13	(30)	25
– other[3]	26	323	230	(2,413)	(1,834)
Asia	4,995	2,981	3,529	2,219	13,724
– Hong Kong	4,521	1,309	955	(580)	6,205
– Australia	147	180	157	(37)	447
– India	45	304	622	306	1,277
– Indonesia	4	71	100	(9)	166
– mainland China	(109)	303	526	2,678	3,398
– Malaysia	110	89	219	(35)	383
– Singapore	244	255	351	(78)	772
– Taiwan	36	43	137	(17)	199
– other	(3)	427	462	(9)	877
Middle East and North Africa	313	290	861	236	1,700
– Egypt	101	76	194	(5)	366
– UAE	128	107	320	(86)	469
– Saudi Arabia[4]	30	—	94	345	469
– other	54	107	253	(18)	396
North America	541	1,169	461	(505)	1,666
– US	209	557	270	(387)	649
– Canada	243	548	140	(89)	842
– other	89	64	51	(29)	175
Latin America	286	355	325	(113)	853
– Mexico	269	273	180	(110)	612
– other	17	82	145	(3)	241
Year ended 31 Dec 2022	6,040	7,447	5,099	(1,058)	17,528

1 *UK includes results from the ultimate holding company, HSBC Holdings plc, and the separately incorporated group of service companies ('ServCo Group').*
2 *Includes the impact of goodwill impairment of $425m as a result of the reclassification of our retail banking operations in France to held for sale. As per Group accounting policy, HSBC's cash-generating units are based on geographical regions, sub-divided by global businesses.*
3 *Corporate Centre includes inter-company debt eliminations of $1,850m.*
4 *Includes the results of HSBC Saudi Arabia and our share of the profits of our associate, The Saudi British Bank.*

Profit/(loss) before tax by country/territory within global businesses (continued)

	2021				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Europe	1,817	2,893	(299)	(632)	3,779
– UK[1]	1,511	2,475	(487)	20	3,519
– of which: HSBC UK Bank plc (ring-fenced bank)	*2,047*	*2,929*	*127*	*(318)*	*4,785*
– of which: HSBC Bank plc (non-ring-fenced bank)	*176*	*259*	*220*	*(17)*	*638*
– of which: Holdings and other	*(712)*	*(713)*	*(834)*	*355*	*(1,904)*
– France	236	163	(97)	(133)	169
– Germany	17	82	155	67	321
– Switzerland	46	10	—	(12)	44
– other	7	163	130	(574)	(274)
Asia	4,366	2,364	3,193	2,326	12,249
– Hong Kong	4,076	1,303	920	(383)	5,916
– Australia	146	132	131	(26)	383
– India	20	265	593	232	1,110
– Indonesia	14	12	111	(8)	129
– mainland China	(95)	288	586	2,554	3,333
– Malaysia	37	(23)	145	(20)	139
– Singapore	145	107	231	(13)	470
– Taiwan	14	16	106	(5)	131
– other	9	264	370	(5)	638
Middle East and North Africa	194	235	805	189	1,423
– Egypt	79	42	163	(2)	282
– UAE	91	3	342	(61)	375
– Saudi Arabia[2]	17	—	65	274	356
– other	7	190	235	(22)	410
North America	60	1,023	697	(406)	1,374
– US	(131)	472	524	(337)	528
– Canada	141	544	145	(62)	768
– other	50	7	28	(7)	78
Latin America	(304)	162	326	(103)	81
– Mexico	305	88	222	(46)	569
– other[3]	(609)	74	104	(57)	(488)
Year ended 31 Dec 2021	6,133	6,677	4,722	1,374	18,906

1 UK includes results from the ultimate holding company, HSBC Holdings plc, and the separately incorporated group of service companies ('ServCo Group').
2 Includes the results of HSBC Saudi Arabia and our share of the profits of our associate, The Saudi British Bank.
3 Includes the impact of goodwill impairment of $587m. As per Group accounting policy, HSBC's cash-generating units are based on geographical regions, sub-divided by global businesses.

Profit/(loss) before tax by country/territory within global businesses (continued)

	2020				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Europe	(680)	(529)	(1,809)	(1,187)	(4,205)
– UK[1]	(357)	(543)	(1,769)	(1,555)	(4,224)
– of which: HSBC UK Bank plc (ring-fenced bank)	*113*	*167*	*90*	*(124)*	*246*
– of which: HSBC Bank plc (non-ring fenced bank)	*109*	*36*	*(1,030)*	*(454)*	*(1,339)*
– of which: Holdings and other	*(579)*	*(746)*	*(829)*	*(977)*	*(3,131)*
– France	(340)	(168)	(347)	(310)	(1,165)
– Germany	17	16	197	(15)	215
– Switzerland	(2)	(4)	—	(10)	(16)
– other	2	170	110	703	985
Asia	5,031	1,944	4,002	1,855	12,832
– Hong Kong	4,927	1,787	1,674	(181)	8,207
– Australia	108	76	138	(7)	315
– India	16	187	593	228	1,024
– Indonesia	(6)	(14)	147	(13)	114
– mainland China	(34)	295	506	1,845	2,612
– Malaysia	8	33	141	(55)	127
– Singapore	45	(644)	239	(12)	(372)
– Taiwan	9	18	104	(2)	129
– other	(42)	206	460	52	676
Middle East and North Africa	(15)	(120)	478	(324)	19
– Egypt	68	46	185	(1)	298
– UAE	(21)	(210)	102	(39)	(168)
– Saudi Arabia[2]	21	—	26	(264)	(217)
– other	(83)	44	165	(20)	106
North America	(449)	366	712	(461)	168
– US	(547)	139	573	(391)	(226)
– Canada	52	225	100	(67)	310
– other	46	2	39	(3)	84
Latin America	(183)	(22)	233	(65)	(37)
– Mexico	(115)	(106)	59	(25)	(187)
– other	(68)	84	174	(40)	150
Year ended 31 Dec 2020	3,704	1,639	3,616	(182)	8,777

1 UK includes results from the ultimate holding company, HSBC Holdings plc, and the separately incorporated group of service companies ('ServCo Group').

2 Includes the results of HSBC Saudi Arabia and our share of the profits of our associate, The Saudi British Bank.

Reconciliation of alternative performance measures

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Use of alternative performance measures

Our reported results are prepared in accordance with IFRSs as detailed in our financial statements starting on page 324.

As described on page 98, we use a combination of reported and alternative performance measures, including those derived from our reported results that eliminate factors that distort year-on-year comparisons. These are considered alternative performance measures (non-GAAP financial measures).

The following information details the adjustments made to the reported results and the calculation of other alternative performance measures. All alternative performance measures are reconciled to the closest reported performance measure.

Return on average ordinary shareholders' equity and return on average tangible equity

Return on average ordinary shareholders' equity ('RoE') is computed by taking profit attributable to the ordinary shareholders of the parent company ('reported results'), divided by average ordinary shareholders' equity ('reported equity') for the period. The adjustment to reported results and reported equity excludes amounts attributable to non-controlling interests and other equity instruments.

Return on average tangible equity ('RoTE') is computed by adjusting reported results for the movements in the present value of in-force long-term insurance business ('PVIF') and for impairment of goodwill and other intangible assets (net of tax), divided by average reported equity adjusted for goodwill, intangibles and PVIF for the period.

Return on average tangible equity excluding significant items is annualised profit attributable to ordinary shareholders, excluding changes in PVIF and significant items (net of tax), divided by average tangible shareholders' equity excluding fair value of own debt, debit valuation adjustment ('DVA') and other adjustments for the period. Since 1 January 2021, the UK bank levy has no longer been excluded from the calculation of this measure. Comparative data have not been re-presented.

We provide RoTE ratios in addition to RoE as a way of assessing our performance, which is closely aligned to our capital position.

Return on average ordinary shareholders' equity and return on average tangible equity

	2022	2021	2020
	$m	$m	$m
Profit			
Profit attributable to the ordinary shareholders of the parent company	**14,822**	12,607	3,898
Impairment of goodwill and other intangible assets (net of tax)	**531**	608	1,036
Decrease/(increase) in PVIF (net of tax)	**(264)**	(58)	(253)
Profit attributable to the ordinary shareholders, excluding goodwill, other intangible assets impairment and PVIF	**15,089**	13,157	4,681
Significant items (net of tax) and other adjustments[1,2]	**2,561**	2,086	2,402
Profit attributable to the ordinary shareholders, excluding goodwill impairment, PVIF and significant items[1]	**17,650**	15,243	7,083
Equity			
Average total shareholders' equity	**191,998**	199,295	189,719
Effect of average preference shares and other equity instruments	**(21,202)**	(22,814)	(22,326)
Average ordinary shareholders' equity	**170,796**	176,481	167,393
Effect of goodwill, PVIF and other intangibles (net of deferred tax)	**(17,935)**	(17,705)	(17,292)
Average tangible equity	**152,861**	158,776	150,101
Fair value of own debt, DVA and other adjustments	**(1,125)**	1,278	422
Average tangible equity excluding fair value of own debt, DVA and other adjustments	**151,736**	160,054	150,523
	%	%	%
Ratio			
Return on average ordinary shareholders' equity	**8.7**	7.1	2.3
Return on average tangible equity	**9.9**	8.3	3.1
Return on average tangible equity excluding significant items[1]	**11.6**	9.5	4.7

1 *Since 1 January 2021, the UK bank levy has no longer been excluded from the calculation of this measure. Comparative data have not been represented.*

2 *Other adjustments includes entries relating to the timing of payments on additional tier 1 coupons.*

The following table details the adjustments made to reported results by global business:

Return on average tangible equity by global business

	Year ended 31 Dec 2022				
	Wealth and Personal Banking	**Commercial Banking**	**Global Banking and Markets**	**Corporate Centre**	**Total**
	$m	**$m**	**$m**	**$m**	**$m**
Profit before tax	**6,040**	**7,447**	**5,099**	**(1,058)**	**17,528**
Tax expense	**(1,218)**	**(1,737)**	**(823)**	**2,920**	**(858)**
Profit after tax	**4,822**	**5,710**	**4,276**	**1,862**	**16,670**
Less attributable to: preference shareholders, other equity holders, non-controlling interests	**(696)**	**(493)**	**(603)**	**(56)**	**(1,848)**
Profit attributable to ordinary shareholders of the parent company	**4,126**	**5,217**	**3,673**	**1,806**	**14,822**
Increase in PVIF (net of tax)	**(251)**	**36**	**—**	**(49)**	**(264)**
Significant items (net of tax)	**1,960**	**197**	**300**	**581**	**3,038**
Other adjustments	**6**	**(15)**	**(24)**	**87**	**54**
Profit attributable to ordinary shareholders, excluding PVIF, significant items	**5,841**	**5,435**	**3,949**	**2,425**	**17,650**
Average tangible shareholders' equity excluding fair value of own debt, DVA and other adjustments	**31,519**	**38,373**	**36,944**	**44,900**	**151,736**
Return on average tangible equity excluding significant items (%)	**18.5**	**14.2**	**10.7**	**5.4**	**11.6**
	Year ended 31 Dec 2021				
Profit before tax	6,133	6,677	4,722	1,374	18,906
Tax expense	(1,540)	(1,783)	(1,020)	130	(4,213)
Profit after tax	4,593	4,894	3,702	1,504	14,693
Less attributable to: preference shareholders, other equity holders, non-controlling interests	(735)	(665)	(618)	(68)	(2,086)
Profit attributable to ordinary shareholders of the parent company	3,858	4,229	3,084	1,436	12,607
Increase in PVIF (net of tax)	(65)	4	—	3	(58)
Significant items (net of tax)	850	51	517	1,269	2,687
Other adjustments	3	(4)	(3)	11	7
Profit attributable to ordinary shareholders, excluding PVIF, significant items	4,646	4,280	3,598	2,719	15,243
Average tangible shareholders' equity excluding fair value of own debt, DVA and other adjustments	30,587	39,487	41,816	48,164	160,054
Return on average tangible equity excluding significant items (%)	15.2	10.8	8.6	5.6	9.5

Net asset value and tangible net asset value per ordinary share

Net asset value per ordinary share is total shareholders' equity less non-cumulative preference shares and capital securities ('total ordinary shareholders' equity'), divided by the number of ordinary shares in issue excluding shares that the company has purchased and are held in treasury.

Tangible net asset value per ordinary share is total ordinary shareholders' equity excluding goodwill, PVIF and other intangible assets (net of deferred tax) ('tangible ordinary shareholders' equity'), divided by the number of basic ordinary shares in issue excluding shares that the company has purchased and are held in treasury.

Net asset value and tangible net asset value per ordinary share

	2022	2021	2020
	$m	$m	$m
Total shareholders' equity	**187,484**	198,250	196,443
Preference shares and other equity instruments	**(19,746)**	(22,414)	(22,414)
Total ordinary shareholders' equity	**167,738**	175,836	174,029
Goodwill, PVIF and intangible assets (net of deferred tax)	**(18,383)**	(17,643)	(17,606)
Tangible ordinary shareholders' equity	**149,355**	158,193	156,423
Basic number of $0.50 ordinary shares outstanding	**19,739**	20,073	20,184
	$	$	$
Value per share			
Net asset value per ordinary share	**8.50**	8.76	8.62
Tangible net asset value per ordinary share	**7.57**	7.88	7.75

Post-tax return and average total shareholders' equity on average total assets

Post-tax return on average total assets is profit after tax divided by average total assets for the period. Average total shareholders' equity to average total assets is average total shareholders' equity divided by average total assets for the period.

Post-tax return and average total shareholders' equity on average total assets

	2022	2021	2020
	$m	$m	$m
Profit after tax	**16,670**	14,693	6,099
Average total shareholders' equity	**191,998**	199,295	189,719
Average total assets	**3,030,574**	3,012,437	2,936,939
Ratio	**%**	%	%
Post-tax return on average total assets	**0.6**	0.5	0.2
Average total shareholders' equity to average total assets	**6.34**	6.62	6.46

Expected credit losses and other credit impairment charges as % of average gross loans and advances to customers

Expected credit losses and other credit impairment charges ('ECL') as % of average gross loans and advances to customers is the annualised adjusted ECL divided by adjusted average gross loans and advances to customers for the period. The adjusted numbers are derived by adjusting reported ECL and loans and advances to customers for the effects of foreign currency translation differences.

Expected credit losses and other credit impairment charges as % of average gross loans and advances to customers

	2022	2021	2020
	$m	$m	$m
Expected credit losses and other credit impairment charges ('ECL')	**(3,592)**	928	(8,817)
Currency translation		(174)	2
Adjusted ECL	**(3,592)**	754	(8,815)
Average gross loans and advances to customers	**1,015,445**	1,057,412	1,047,114
Currency translation	**(13,325)**	(63,174)	(34,883)
Average gross loans and advances to customers – at most recent balance sheet foreign exchange rates	**1,002,120**	994,238	1,012,231
Average gross loans and advances to customers, including held for sale	1,036,974	1,058,947	1,047,114
Currency translation	(12,846)	(63,012)	(34,883)
Average gross loans and advances to customers, including held for sale – at most recent balance sheet foreign exchange rates	1,024,128	995,935	1,012,231
Ratio	**%**	%	%
Expected credit losses and other credit impairment charges as % of average gross loans and advances to customers	**0.36**	(0.08)	0.87
Expected credit losses and other credit impairment charges as % of average gross loans and advances to customers, including held for sale	**0.35**	(0.08)	0.87

Risk review

Our risk review outlines our approach to risk management, how we identify and monitor top and emerging risks, and the actions we take to mitigate them. In addition, it explains our material banking risks, including how we manage capital.

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Identifying suspicious activities through our award-winning AI tool

We are using the latest artificial intelligence technology to help identify suspicious activities to help prevent financial crime. Our dynamic risk assessment solution brings data together on the Cloud, and uses machine learning to analyse and identify criminal activity by making use of relevant data, with the ability to identify patterns that humans are unlikely to spot.

The tool, which we first developed in November 2021 and is active in several markets including the UK, enables suspicious activity to be identified twice as fast than the previous process and reduces case volumes by 60%.

The solution was recognised at the 2022 Banking Tech Awards, winning 'Best Use of Cloud' and 'Best Use of AI'. We plan to roll it out to other markets throughout 2023.

Our approach to risk

Our risk appetite

We recognise the importance of a strong culture, which refers to our shared attitudes, beliefs, values and standards that shape behaviours including those related to risk awareness, risk taking and risk management. All our people are responsible for the management of risk, with the ultimate accountability residing with the Board.

We seek to build our business for the long term by balancing social, environmental and economic considerations in the decisions we make. Our strategic priorities are underpinned by our endeavour to operate in a sustainable way. This helps us to carry out our social responsibility and manage the risk profile of the business. We are committed to managing and mitigating climate-related risks, both physical and transition risks, and continue to incorporate consideration of these into how we manage and oversee risks internally and with our customers.

The following principles guide the Group's overarching appetite for risk and determine how our businesses and risks are managed.

Financial position

- We aim to maintain a strong capital position, defined by regulatory and internal capital ratios.
- We carry out liquidity and funding management for each operating entity, on a stand-alone basis.

Operating model

- We seek to generate returns in line with our risk appetite and strong risk management capability.
- We aim to deliver sustainable and diversified earnings and consistent returns for shareholders.

Business practice

- We have no appetite for deliberately or knowingly causing detriment to consumers, or incurring a breach of the letter or spirit of regulatory requirements.
- We have no appetite for inappropriate market conduct by any member of staff or by any Group business.
- We are committed to managing the climate risks that have an impact on our financial position, and delivering on our net zero ambition.
- We consider and, where appropriate, mitigate reputational risk that may arise from our business activities and decisions.
- We monitor non-financial risk exposure against risk appetite, including exposure related to inadequate or failed internal processes, people and systems, or events that impact our customers or can lead to sub-optimal returns to shareholders, censure, or reputational damage.

Enterprise-wide application

Our risk appetite encapsulates the consideration of financial and non-financial risks. We define financial risk as the risk of a financial loss as a result of business activities. We actively take these types of risks to maximise shareholder value and profits. Non-financial risk is the risk to achieving our strategy or objectives as the result of failed internal processes, people and systems, or from external events.

Our risk appetite is expressed in both quantitative and qualitative terms and applied at the global business level, at the regional level and to material operating entities. Every three years, the Group Risk and Compliance function commissions an external independent firm to review the Group's approach to risk appetite and to help ensure that it remains in line with market best practice and regulatory expectations. This review was last carried out in 2021 and confirmed the Group's risk appetite statement ('RAS') remains aligned to best practices, regulatory expectations and strategic goals. Our risk appetite continues to evolve and expand its scope as part of our regular review process.

The Board reviews and approves the Group's risk appetite regularly to make sure it remains fit for purpose. The Group's risk appetite is considered, developed and enhanced through:

- an alignment with our strategy, purpose, values and customer needs;
- trends highlighted in other Group risk reports;
- communication with risk stewards on the developing risk landscape;
- strength of our capital, liquidity and balance sheet;
- compliance with applicable laws and regulations;
- effectiveness of the applicable control environment to mitigate risk, informed by risk ratings from risk control assessments;
- functionality, capacity and resilience of available systems to manage risk; and
- the level of available staff with the required competencies to manage risks.

We formally articulate our risk appetite through our RAS. Setting out our risk appetite ensures that we agree a suitable level of risk for our strategy. In this way, risk appetite informs our financial planning process and helps senior management to allocate capital to business activities, services and products.

The RAS is applied to the development of business line strategies, strategic and business planning and remuneration. At a Group level, performance against the RAS is reported to the Group Risk Management Meeting alongside key risk indicators to support targeted insight and discussion on breaches of risk appetite and any associated mitigating actions. This reporting allows risks to be promptly identified and mitigated, and informs risk-adjusted remuneration to drive a strong risk culture.

Each global business, region and material operating entity is required to have its own RAS, which is monitored to help ensure it remains aligned with the Group's RAS. Each RAS and business activity is guided and underpinned by qualitative principles and/or quantitative metrics.

Risk management

We recognise that the primary role of risk management is to protect our customers, business, colleagues, shareholders and the communities that we serve, while ensuring we are able to support our strategy and provide sustainable growth. This is supported through our three lines of defence model described on page 134.

The implementation of our business strategy remains a key focus. As we implement change initiatives, we actively manage the execution risks. We also perform periodic risk assessments, including against strategies, to help ensure retention of key personnel for our continued safe operation.

We aim to use a comprehensive risk management approach across the organisation and across all risk types, underpinned by our culture and values. This is outlined in our risk management framework, including the key principles and practices that we employ in managing material risks, both financial and non-financial. The framework fosters continual monitoring, promotes risk awareness and encourages a sound operational and strategic decision-making and escalation process. It also supports a consistent approach to identifying, assessing, managing and reporting the risks we accept and incur in our activities, with clear accountabilities. We actively review and enhance our risk management framework and our approach to managing risk, through our activities with regard to: people and capabilities; governance; reporting and management information; credit risk management models; and data.

Group Risk and Compliance is independent from the global businesses, including our sales and trading functions, to provide challenge, oversight and appropriate balance in risk/return decisions.

Our risk management framework

The following diagram and descriptions summarise key aspects of the risk management framework, including governance, structure, risk management tools and our culture, which together help align employee behaviour with risk appetite.

Key components of our risk management framework

HSBC Values and risk culture		
Risk governance	Non-executive risk governance	The Board approves the Group's risk appetite, plans and performance targets. It sets the 'tone from the top' and is advised by the Group Risk Committee (see page 255).
	Executive risk governance	Our executive risk governance structure is responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk within the Group (see pages 134 and 142).
Roles and responsibilities	Three lines of defence model	Our 'three lines of defence' model defines roles and responsibilities for risk management. An independent Group Risk and Compliance function helps ensure the necessary balance in risk/return decisions (see page 134).
Processes and tools	Risk appetite	The Group has processes in place to identify/assess, monitor, manage and report risks to help ensure we remain within our risk appetite.
	Enterprise-wide risk management tools	
	Active risk management: identification/assessment, monitoring, management and reporting	
Internal controls	Policies and procedures	Policies and procedures define the minimum requirements for the controls required to manage our risks.
	Control activities	Operational and resilience risk management defines minimum standards and processes for managing operational risks and internal controls.
	Systems and infrastructure	The Group has systems and/or processes that support the identification, capture and exchange of information to support risk management activities.

Risk governance

The Board has ultimate responsibility for the effective management of risk and approves our risk appetite.

The Group Chief Risk and Compliance Officer, supported by the Group Risk Management Meeting, holds executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework.

The Group Chief Risk and Compliance Officer is also responsible for the oversight of reputational risk, with the support of the Group Reputational Risk Committee. The Group Reputational Risk Committee considers matters arising from customers, transactions and third parties that either present a serious potential reputational risk to the Group or merit a Group-led decision to ensure a consistent risk management approach across the regions, global businesses and global functions. Further details can be found under the 'Reputational risk' section of www.hsbc.com/our-approach/risk-and-responsibility.

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. All our people have a role to play in risk management. These roles are defined using the three lines of defence model, which takes into account our business and functional structures as described in the following commentary, 'Our responsibilities'.

We use a defined executive risk governance structure to help ensure there is appropriate oversight and accountability of risk, which facilitates reporting and escalation to the Group Risk Management Meeting. This structure is summarised in the following table.

Governance structure for the management of risk and compliance

Authority	Membership	Responsibilities include:
Group Risk Management Meeting	Group Chief Risk and Compliance Officer Group Chief Legal Officer Group Chief Executive Group Chief Financial Officer Group Head of Financial Crime and Group Money Laundering Reporting Officer Group Head of Compliance All other Group Executive Committee members	• Supporting the Group Chief Risk and Compliance Officer in exercising Board-delegated risk management authority • Overseeing the implementation of risk appetite and the risk management framework • Forward-looking assessment of the risk environment, analysing possible risk impacts and taking appropriate action • Monitoring all categories of risk and determining appropriate mitigating action • Promoting a supportive Group culture in relation to risk management and conduct
Group Risk and Compliance Executive Committee	Group Chief Risk and Compliance Officer Chief risk officers of HSBC's global businesses and regions Heads of Global Risk and Compliance sub-functions	• Supporting the Group Chief Risk and Compliance Officer in providing strategic direction for the Group Risk and Compliance function, setting priorities and providing oversight • Overseeing a consistent approach to accountability for, and mitigation of, risk and compliance across the Group
Global business/regional risk management meetings	Global business/regional chief risk officer Global business/regional chief executive officer Global business/regional chief financial officer Global business/regional heads of global functions	• Supporting the Group Chief Risk and Compliance Officer in exercising Board-delegated risk management authority • Forward-looking assessment of the risk environment • Implementation of risk appetite and the risk management framework • Monitoring all categories of risk and overseeing appropriate mitigating actions • Embedding a supportive culture in relation to risk management and controls

The Board committees with responsibility for oversight of risk-related matters are set out on page 258.

Treasury risks are the responsibility of the Group Executive Committee and the Group Risk Committee. Global Treasury actively manages these risks, supported by the Holdings Asset and Liability Management Committee ('ALCO') and local ALCOs, overseen by Treasury Risk Management and the Group Risk Management Meeting. Further details on treasury risk management are set out on page 202.

Our responsibilities

All our people are responsible for identifying and managing risk within the scope of their roles. Roles are defined using the three lines of defence model, which takes into account our business and functional structures as described below.

Three lines of defence

To create a robust control environment to manage risks, we use an activity-based three lines of defence model. This model delineates management accountabilities and responsibilities for risk management and the control environment.

The model underpins our approach to risk management by clarifying responsibility and encouraging collaboration, as well as enabling efficient coordination of risk and control activities. The three lines of defence are summarised below:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them in line with risk appetite, and ensuring that the right controls and assessments are in place to mitigate them.
- The second line of defence challenges the first line of defence on effective risk management, and provides advice and guidance in relation to the risk.
- The third line of defence is our Global Internal Audit function, which provides independent assurance as to whether our risk management approach and processes are designed and operating effectively.

Group Risk and Compliance function

Our Group Risk and Compliance function is responsible for the Group's risk management framework. This responsibility includes establishing global policy, monitoring risk profiles, and identifying and managing forward-looking risk. Group Risk and Compliance is made up of sub-functions covering all risks to our business. Forming part of the second line of defence, the Group Risk and Compliance function is independent from the global businesses, including sales and trading functions, to provide challenge, appropriate oversight and balance in risk/return decisions.

Responsibility for minimising both financial and non-financial risk lies with our people. They are required to manage the risks of the business and operational activities for which they are responsible. We maintain adequate oversight of our risks through our various specialist risk stewards and the collective accountability held by our chief risk officers.

We have continued to strengthen the control environment and our approach to the management of non-financial risk, as set out in our risk management framework. The management of non-financial risk focuses on governance and risk appetite, and provides a single view of the non-financial risks that matter the most as well as the associated controls. It incorporates a risk management system designed to enable the active management of non-financial risk. Our ongoing focus is on simplifying our approach to non-financial risk management, while driving more effective oversight and better end-to-end identification and management of non-financial risks. This is overseen by the Operational and Resilience Risk function, headed by the Group Head of Operational and Resilience Risk.

Stress testing and recovery planning

We operate a wide-ranging stress testing programme that is a key part of our risk management and capital and liquidity planning. Stress testing provides management with key insights into the impact of severely adverse events on the Group, and provides confidence to regulators on the Group's financial stability.

Our stress testing programme assesses our capital and liquidity strength through a rigorous examination of our resilience to external shocks. As well as undertaking regulatory-driven stress tests, we conduct our own internal stress tests in order to understand the nature and level of all material risks, quantify the impact of such risks and develop plausible business-as-usual mitigating actions.

Internal stress tests

Our internal capital assessment uses a range of stress scenarios that explore risks identified by management. They include potential adverse macroeconomic, geopolitical and operational risk events, as well as other potential events that are specific to HSBC.

The selection of stress scenarios is based upon the output of our identified top and emerging risks and our risk appetite. Stress testing analysis helps management understand the nature and extent of vulnerabilities to which the Group is exposed. Using this information, management decides whether risks can or should be mitigated through management actions or, if they were to crystallise, be absorbed through capital and liquidity. This in turn informs decisions about preferred capital and liquidity levels and allocations.

In addition to the Group-wide stress testing scenarios, each major subsidiary conducts regular macroeconomic and event-driven scenario analysis specific to its region. They also participate, as required, in the regulatory stress testing programmes of the jurisdictions in which they operate, such as stress tests required by the Bank of England ('BoE') in the UK, the Federal Reserve Board ('FRB') in the US, and the Hong Kong Monetary Authority ('HKMA') in Hong Kong. Global functions and businesses also perform bespoke stress testing to inform their assessment of risks to potential scenarios.

We also conduct reverse stress tests each year at Group level and, where required, at subsidiary entity level to understand potential extreme conditions that would make our business model non-viable. Reverse stress testing identifies potential stresses and vulnerabilities we might face, and helps inform early warning triggers, management actions and contingency plans designed to mitigate risks.

Recovery and resolution plans

Recovery and resolution plans form part of the integral framework safeguarding the Group's financial stability. The Group recovery plan, together with stress testing, help us understand the likely outcomes of adverse business or economic conditions and in the identification of appropriate risk mitigating actions. The Group is committed to further developing its recovery and resolution capabilities in line with the BoE's Resolvability Assessment Framework requirements.

Key developments in 2022

We actively managed the risks related to macroeconomic uncertainties including inflation, fiscal and monetary policy, the Russia-Ukraine war, broader geopolitical uncertainties and continued risks resulting from the Covid-19 pandemic, as well as other key risks described in this section. In addition, we sought to enhance our risk management in the following areas:

- We continued to improve our risk governance decision making, particularly with regard to the governance of treasury risk, to help ensure senior executives have appropriate oversight and visibility of macroeconomic trends around inflation and interest rates.
- We adapted our interest rate risk management strategy as market and official interest rates increased in reaction to inflationary pressures. This included the Board approving in September a new interest rate risk in the banking book strategy, a managed reduction in the duration risk of our hold-to-collect-and-sell asset portfolio and an increase in net interest income stabilisation.
- We began a process of enhancement of our country credit risk management framework to strengthen our control of risk tolerance and appetite at a country level.
- We continued to develop our approach to emerging risk identification and management, including the use of forward-looking indicators to support our analysis.
- We enhanced our enterprise risk reporting processes to place a greater focus on our emerging risks, including by capturing the materiality, oversight and individual monitoring of these risks.
- We sought to further strengthen our third-party risk policy and processes to improve control and oversight of our material third parties to maintain our operational resilience, and to meet new and evolving regulatory requirements.
- We made progress with our comprehensive regulatory reporting programme to strengthen our global processes, improve consistency and enhance controls.
- We continued to embed the governance and oversight around model adjustments and related processes for IFRS 9 models and Sarbanes-Oxley controls.
- We commenced a programme to enhance our framework for managing the risks associated with machine learning and artificial intelligence ('AI').
- Through our climate risk programme, we continued to embed climate considerations throughout the organisation, including updating the scope of our programme to cover all risk types, expanding the scope of climate-related training, developing new climate risk metrics to monitor and manage exposures, and developing our internal climate scenario exercise.
- We sought to improve the effectiveness of our financial crime controls, deploying advanced analytics capabilities into new markets. We refreshed our financial crime policies to help ensure they remain up to date and address changing and emerging risks. We continue to monitor regulatory changes.

Top and emerging risks

We use a top and emerging risks process to provide a forward-looking view of issues with the potential to threaten the execution of our strategy or operations over the medium to long term.

We proactively assess the internal and external risk environment, as well as review the themes identified across our regions and global businesses, for any risks that may require global escalation. We update our top and emerging risks as necessary.

Our current top and emerging risks are as follows.

Externally driven

Geopolitical and macroeconomic risks

The Russia-Ukraine war has had far-reaching geopolitical and economic implications. HSBC is monitoring the impacts of the war and continues to respond to the further economic sanctions and trade restrictions that have been imposed on Russia in response. In particular, significant sanctions and trade restrictions imposed against Russia have been put in place by the UK, the US and the EU, as well as other countries. Such sanctions and restrictions have specifically targeted certain Russian government officials, politically exposed persons, business people, Russian oil imports, energy products, financial institutions and other major Russian companies. In addition, there have been put in place more generally applicable investment, export, and import bans and restrictions. In response to such sanctions and trade restrictions, as well as asset flight, Russia has implemented certain countermeasures.

Further sanctions, trade restrictions and Russian countermeasures may adversely impact the Group, its customers and the markets in which the Group operates by creating regulatory, reputational and market risks. Our business in Russia principally serves multinational corporate clients headquartered in other countries, is not accepting new business or customers and is consequently on a declining trend. Following a strategic review, HSBC Europe BV (a wholly-owned subsidiary of HSBC Bank plc) has entered into an agreement to sell its wholly-owned subsidiary HSBC Bank (RR) (Limited Liability Company), subject to regulatory and governmental approvals.

Global commodity markets have been significantly impacted by the Russia-Ukraine war and localised Covid-19 outbreaks, leading to continued supply chain disruptions. This has resulted in product shortages appearing across several regions, and increased prices for both energy and non-energy commodities, such as food. We do not

expect these to ease significantly in the near term. In turn, this has had a significant impact on global inflation. Relatively mild weather, until recently, and diversification of fuel sources have nevertheless helped regions most dependent on Russian supply to substantially reduce risks of rationing over the winter months.

China's policy measures issued at the end of 2022 have increased liquidity and the supply of credit to the mainland China commercial real estate sector. Recovery in the underlying domestic residential demand and improved customer sentiment will be necessary to support the ongoing health of the sector. We will continue to monitor the sector closely, notably the risk of further idiosyncratic real estate defaults and the potential associated impact on wider market, investor and consumer sentiment. Given that parts of the global economy are in, or close to, recession, the demand for Chinese exports may also diminish.

Rising global inflation has prompted central banks to tighten monetary policy. Since the beginning of 2022, the US Federal Reserve Board ('FRB') has delivered a cumulative 450 basis point ('bps') increase in the Federal Funds rate. The European Central Bank lagged the FRB initially, but its benchmark rate has subsequently been increased by 300bps since July 2022. As of mid-February 2023, interest-rate futures suggested market uncertainty as to whether the FRB would begin to ease monetary policy over the 12-month horizon. Should monetary policy rates move materially higher than current expectations, a realignment of market expectations could cause turbulence in financial asset prices.

Financial markets have also shown reduced appetite for expansionary fiscal policies in the context of high debt ratios. Following the fiscal statement of 23 September 2022 by the UK government, there was a fall in the value of sterling and a sharp rise in the yields of UK government securities, known as gilts. Following this, the Bank of England reversed its plan to begin selling its gilt holdings from September 2022, and the UK government reversed most of the previously announced fiscal measures. We continue to monitor our risk profile closely in the context of uncertainty over global macroeconomic policies.

Higher inflation and interest rate expectations around the world – and the resulting economic uncertainty – have had an impact on expected credit losses and other credit impairment charges ('ECL'). The combined pressure of higher inflation and interest rates may impact the ability of our customers to repay debt. Our Central scenario, which has the highest probability weighting in our IFRS 9 'Financial Instruments' calculations of ECL, assumes low growth and a higher inflation environment across many of our key markets. However, due to the rapidly changing economic conditions, the potential for forecast dispersion and volatility remain high, impacting the degree of accuracy and certainty of our Central scenario forecast. The level of volatility varies by market, depending on exposure to commodity price increases, supply chain constraints, the monetary policy response to inflation and the public health policy response to the Covid-19 pandemic. As a result, our Central scenario for impairment has not been assigned the same likelihood of occurrence across our key markets. There is also uncertainty with respect to the relationship between the economic drivers and the historical loss experience, which has required adjustments to modelled ECL in cases where we determined that the model was unable to capture the material underlying risks.

For further details of our Central and other scenarios, see 'Measurement uncertainty and sensitivity analysis of ECL estimates' on page 153.

Global tensions over trade, technology and ideology are manifesting themselves in divergent regulatory standards and compliance regimes, presenting long-term strategic challenges for multinational businesses.

The US-China relationship remains complex. To date, the UK, the US, the EU and other countries have imposed various sanctions and trade restrictions on Chinese persons and companies. Although sanctions and trade restrictions are difficult to predict, increases in diplomatic tensions between China and the US and other countries could result in sanctions that could negatively impact the Group, its customers and the markets in which the Group operates. There is a continued risk of additional sanctions and trade restrictions being imposed by the US and other governments in relation to human rights, technology, and other issues with China, and this could create a more complex operating environment for the Group and its customers.

China has in turn announced a number of its own sanctions and trade restrictions that target, or provide authority to target, foreign individuals and companies.

These and any future measures and countermeasures that may be taken by the US, China and other countries may affect the Group, its customers and the markets in which the Group operates.

Negotiations between the UK and the EU over the operation of the Northern Ireland Protocol are continuing. While there are signs that differences may be diminishing, failure to reach agreement could have implications for the future operation of the EU-UK Trade and Cooperation Agreement.

In June 2022, the UK government published proposed legislation that seeks to amend the Protocol in a number of respects. In response, the EU launched infringement procedures against the UK, and is evaluating the UK response, received in September 2022. If the proposed legislation were to pass, and infringement procedures progressed, it could further complicate the terms of trade between the UK and the EU and potentially prevent progress in other areas such as financial services. Over the medium to long term, the UK's withdrawal from the EU may impact markets and increase economic risk, particularly in the UK, which could adversely impact our profitability and prospects for growth in this market. We are monitoring the situation closely, including the potential impacts on our customers.

In August 2022, the US Inflation Reduction Act introduced a minimum tax of 15% with effect from 1 January 2023. It is possible that the minimum tax could result in an additional US tax liability over our regular US federal corporate tax liability in a given year, based on the differences between US book and taxable income (including as a result of temporary differences). Given its recent pronouncement, it is unclear at this time what, if any, impact the US Inflation Reduction Act will have on HSBC's US tax rate and US financial results. HSBC will continue to evaluate its impact as further information becomes available. In addition, potential changes to tax legislation and tax rates in the countries and territories in which we operate could increase our effective tax rate in the future.

As the geopolitical landscape evolves, compliance by multinational corporations with their legal or regulatory obligations in one jurisdiction may be seen as supporting the law or policy objectives of that jurisdiction over another, creating additional compliance, reputational and political risks for the Group. We maintain dialogue with our regulators in various jurisdictions on the impact of legal and regulatory obligations on our business and customers.

The financial impact on the Group of geopolitical risks in Asia is heightened due to the region's relatively high contribution to the Group's profitability, particularly in Hong Kong.

While it is the Group's policy to comply with all applicable laws and regulations of all jurisdictions in which it operates, geopolitical risks and tensions, and potential ambiguities in the Group's compliance obligations, will continue to present challenges and risks for the Group and could have a material adverse impact on the Group's business, financial condition, results of operations, prospects and strategy, as well as on the Group's customers.

Expanding data privacy, national security and cybersecurity laws in a number of markets could pose potential challenges to intra-group data sharing. These developments could increase financial institutions' compliance obligations in respect of cross-border transfers of personal information, which may affect our ability to manage financial crime risks across markets.

Mitigating actions

- We closely monitor geopolitical and economic developments in key markets and sectors and undertake scenario analysis where appropriate. This helps us to take portfolio actions where necessary, including through enhanced monitoring, amending our risk appetite and/or reducing limits and exposures.

- We stress test portfolios of particular concern to identify sensitivity to loss under a range of scenarios, with management actions being taken to rebalance exposures and manage risk appetite where necessary.
- We regularly review key portfolios to help ensure that individual customer or portfolio risks are understood and that our ability to manage the level of facilities offered through any downturn is appropriate.
- We continue to manage sanctions and trade restrictions through the use of, and enhancements to, our existing controls.
- We continue to monitor the UK's relationship with the EU, and assess the potential impact on our people, operations and portfolios.
- We have taken steps, where necessary, to enhance physical security in geographical areas deemed to be at high risk from terrorism and military conflicts.

Technology and cybersecurity risk

Together with other organisations, we operate in an extensive and complex technology landscape, which needs to remain resilient in order to support customers, our organisation and financial markets globally. Risks arise where technology is not understood, maintained, or developed appropriately. We also continue to operate in an increasingly hostile cyber threat environment globally. These threats include potential unauthorised access to customer accounts, attacks on our systems or those of our third-party suppliers, and require ongoing investment in business and technical controls to defend against.

Mitigating actions

- We continue to invest in transforming how software solutions are developed, delivered and maintained to improve system resilience. We continue to build security into our software development lifecycle and improve our testing processes and tools.
- We continue to upgrade many of our IT systems, simplify our service provision and replace older IT infrastructure and applications. These enhancements supported global improvements in service availability during 2022 for both our customers and colleagues.
- We continually evaluate threat levels for the most prevalent cyber-attack types and their potential outcomes. To further protect HSBC and our customers and help ensure the safe expansion of our global businesses, we continue to strengthen our controls to reduce the likelihood and impact of advanced malware, data leakage, exposure through third parties and security vulnerabilities.
- We continue to enhance our cybersecurity capabilities, including Cloud security, identity and access management, metrics and data analytics, and third-party security reviews. An important part of our defence strategy is ensuring our colleagues remain aware of cybersecurity issues and know how to report incidents.
- We report and review cyber risk and control effectiveness at executive and non-executive Board level. We also report it across our global businesses, functions and regions to help ensure there is appropriate visibility and governance of the risk and its mitigating actions.
- We participate globally in industry bodies and working groups to collaborate on tactics employed by cyber-crime groups and to work together preventing, detecting and defending against cyber-attacks on financial organisations globally.

Evolving regulatory environment risk

We aim to keep abreast of the emerging regulatory compliance and conduct agenda, which currently includes, but is not limited to: ESG matters; ensuring good customer outcomes; addressing customer vulnerabilities due to cost of living pressures; regulatory compliance; regulatory reporting; employee compliance, including the use of e-communication channels; and the proposed reforms to the UK financial services sector, known as the Edinburgh Reforms. We monitor regulatory developments closely and engage with regulators, as appropriate, to help ensure new regulatory requirements are implemented effectively and in a timely way. The competitive landscape in which the Group operates may be impacted by future regulatory changes and government intervention.

Mitigating actions

- We monitor for regulatory developments to understand the evolving regulatory landscape and seek to respond with changes in a timely manner.
- We engage with governments and regulators, responding to consultations with a view to help shaping regulations that can be implemented effectively. We hold regular meetings with relevant authorities to discuss strategic contingency plans, including those arising from geopolitical issues.
- Our simplified conduct approach aligns to our purpose and values, in particular the value 'we take responsibility'.

Financial crime risk

Financial institutions remain under considerable regulatory scrutiny regarding their ability to detect and prevent financial crime. These evolving challenges include managing conflicting laws and approaches to legal and regulatory regimes, and implementing an unprecedented volume and diverse set of sanctions, notably as a result of the Russia-Ukraine war.

Amid rising inflation and increasing cost of living pressures, we face increasing regulatory expectations with respect to managing internal and external fraud, and protecting vulnerable customers.

The digitisation of financial services continues to have an impact on the payments ecosystem, with an increasing number of new market entrants and payment mechanisms, not all of which are subject to the same level of regulatory scrutiny or regulations as banks. Developments around digital assets and currencies have continued at pace, with an increasing regulatory and enforcement focus on the financial crimes linked to these types of assets.

Expectations with respect to the intersection of ESG issues and financial crime, as our organisation, customers and suppliers transition to net zero, continue to increase. These are particularly focused on potential 'greenwashing', human rights issues and environmental crimes. In addition, climate change itself could heighten risks linked to vulnerable migrant populations in countries where financial crime is already more prevalent.

We also continue to face increasing challenges presented by national data privacy requirements, which may affect our ability to manage financial crime risks across markets.

Mitigating actions

- We continue to manage sanctions and trade restrictions through the use of, and enhancements to, our existing controls.
- We continue to develop our fraud controls and invest in capabilities to fight financial crime through the application of advanced analytics and artificial intelligence.
- We are looking at the impact of a rapidly changing payments ecosystem, as well as risks associated with direct and indirect exposure to digital assets and currencies, in an effort to maintain appropriate financial crime controls.
- We are assessing our existing policies and control framework so that developments relating to ESG are considered and the risks mitigated.
- We engage with regulators, policymakers and relevant international bodies, seeking to address data privacy challenges through international standards, guidance and legislation.

Ibor transition risk

Interbank offered rates ('Ibors') have previously been used extensively to set interest rates on different types of financial transactions and for valuation purposes, risk measurement and performance benchmarking.

Following the UK's Financial Conduct Authority ('FCA') announcement in July 2017 that it would no longer continue to persuade or require panel banks to submit rates for the London interbank offered rate ('Libor') after 2021, we have been actively working to transition legacy

contracts from Ibors to products linked to near risk-free replacement rates ('RFRs') or alternative reference rates.

The publication of sterling, Swiss franc, euro and Japanese yen Libor interest rate benchmarks, as well as Euro Overnight Index Average ('Eonia'), ceased from the end of 2021. Our Ibor transition programme – which is tasked with the development of RFR products and the transition of legacy Ibor products – has continued to support the transition of a limited number of remaining contracts in sterling and Japanese yen Libor, which were published using a 'synthetic' interest rate methodology during 2022. The remaining 'tough legacy' sterling contracts have required protracted client discussions where contracts are complex or restructuring of facilities is required. The publication of 'synthetic' Japanese yen Libor ceased after 31 December 2022. In addition the FCA announced, in September and November 2022, that one month and six-month 'synthetic' sterling Libor rates will cease to be published from 31 March 2023, and three-month 'synthetic' sterling Libor will cease to be published after 31 March 2024. We have or are prepared to transition or remediate the remaining few contracts relying on 'synthetic' sterling settings, outstanding as at 31 December 2022, in advance of those cessation dates.

For the cessation of the publication of US dollar Libor from 30 June 2023, we have implemented the majority of required processes, technology and RFR product capabilities throughout the Group in preparation for upcoming market events. We will continue to transition outstanding legacy contracts through the first half of 2023. We have completed the transition of the majority of our uncommitted lending facilities, and continue to make steady progress with the transition of the outstanding legacy committed lending facilities. Transition of our derivatives portfolio is progressing well with most clients reliant on industry mechanisms to transition to RFRs. For the limited number of bilateral derivatives trades where an alternative transition path is required, client engagement is continuing. For certain products and contracts, including bonds and syndicated loans, we remain reliant on the continued support of agents and third parties, but we continue to progress those contracts requiring transition. We continue to monitor contracts that may be potentially more challenging to transition, and may need to rely upon legislative solutions. Additionally, following the FCA's consultation in November 2022 proposing that US dollar Libor is to be published using a 'synthetic' methodology for a defined period, we will continue to work with our clients to support them through the transition of their products if transition is not completed by 30 June 2023.

For the Group's own debt securities issuances, we continue to have instruments in US dollars, sterling, Japanese yen and Singapore dollars where the terms provide for an Ibor benchmark to be used to reset the coupon rate if HSBC chooses not to redeem them on their call dates. We remain mindful of the various factors that have an impact on the Ibor remediation strategy for our regulatory capital and MREL instruments, including – but not limited to – timescales for cessation of relevant Ibor rates, constraints relating to the governing law of outstanding instruments, the potential relevance of legislative solutions and industry best practice guidance. We remain committed to seeking to remediate or mitigate relevant risks relating to Ibor-demise, as appropriate, on our outstanding regulatory capital and MREL instruments before the relevant calculation dates, which may occur post-cessation of the relevant Ibor rate or rates.

For US dollar Libor and other demising Ibors, we continue to be exposed to, and actively monitor, risks including:

- regulatory compliance and conduct risks, as the transition of legacy contracts to RFRs or alternative rates, or sales of products referencing RFRs, may not deliver fair client outcomes;
- resilience and operational risks, as changes to manual and automated processes, made in support of new RFR methodologies, and the transition of large volumes of Ibor contracts may lead to operational issues;
- legal risk, as issues arising from the use of legislative solutions and from legacy contracts that the Group is unable to transition may result in unintended or unfavourable outcomes for clients and market participants, which could potentially increase the risk of disputes;
- model risk, as there is a risk that changes to our models to replace Ibor-related data adversely affect the accuracy of model outputs; and
- market risk, because as a result of differences in Libor and RFR interest rates, we are exposed to basis risk resulting from the asymmetric adoption of rates across assets, liabilities and products. Additionally the current stage of the Term Secured Overnight Financing Rate ('SOFR') market presents challenges for certain hedge accounting strategies.

While the level of risk is diminishing in line with our process implementation and continued transition of contracts, we will monitor these risks through the remainder of the transition of legacy contracts. Throughout 2023, we plan to continue to engage with our clients and investors to complete an orderly transition of contracts that reference the remaining demising Ibors.

Mitigating actions

- Our global Ibor transition programme, which is overseen by the Group Chief Risk and Compliance Officer, will continue to deliver IT and operational processes to meet its objectives.
- We carry out extensive training, communication and client engagement to facilitate appropriate selection of new rates and products.
- We have dedicated teams in place to support the transition.
- We have actively transitioned legacy contracts and ceased entering into new contracts based on demised or demising Ibors, other than those allowed under regulatory exemptions, and implemented associated monitoring and controls.
- We assess, monitor and dynamically manage risks arising from Ibor transition, and implement specific mitigating controls when required.
- We continue to actively engage with regulatory and industry bodies to mitigate risks relating to 'tough legacy' contracts.

Financial instruments impacted by Ibor reform

(Audited)

Interest Rate Benchmark Reform Phase 2, the amendments to IFRSs issued in August 2020, represents the second phase of the IASB's project on the effects of interest rate benchmark reform. The amendments address issues affecting financial statements when changes are made to contractual cash flows and hedging relationships.

Under these amendments, changes made to a financial instrument measured at other than fair value through profit or loss that are economically equivalent and required by interest rate benchmark reform, do not result in the derecognition or a change in the carrying amount of the financial instrument. Instead they require the effective interest rate to be updated to reflect the change in the interest rate benchmark. In addition, hedge accounting will not be discontinued solely because of the replacement of the interest rate benchmark if the hedge meets other hedge accounting criteria.

At 31 Dec 2022	Financial instruments yet to transition to alternative benchmarks, by main benchmark			
	USD Libor $m	GBP Libor $m	JPY Libor $m	Others[1] $m
Non-derivative financial assets				
Loans and advances to customers	**49,632**	**262**	**—**	**7,912**
Other financial assets	**4,716**	**42**	**—**	**1,562**
Total non-derivative financial assets[2]	**54,348**	**304**	**—**	**9,474**
Non-derivative financial liabilities				
Financial liabilities designated at fair value	**17,224**	**1,804**	**1,179**	**—**
Debt securities in issue	**5,352**	**—**	**—**	**—**
Other financial liabilities	**2,988**	**—**	**—**	**176**
Total non-derivative financial liabilities	**25,564**	**1,804**	**1,179**	**176**
Derivative notional contract amount				
Foreign exchange	**140,223**	**—**	**—**	**7,337**
Interest rate	**2,208,189**	**68**	**—**	**186,952**
Total derivative notional contract amount	**2,348,412**	**68**	**—**	**194,289**

At 31 Dec 2021	Financial instruments yet to transition to alternative benchmarks, by main benchmark			
	USD Libor $m	GBP Libor $m	JPY Libor $m	Others[1] $m
Non-derivative financial assets				
Loans and advances to customers	70,932	18,307	370	8,259
Other financial assets	5,131	1,098	—	2
Total non-derivative financial assets[2]	76,063	19,405	370	8,261
Non-derivative financial liabilities				
Financial liabilities designated at fair value	20,219	4,019	1,399	1
Debt securities in issue	5,255	—	—	—
Other financial liabilities	2,998	78	—	—
Total non-derivative financial liabilities	28,472	4,097	1,399	1
Derivative notional contract amount				
Foreign exchange	137,188	5,157	31,470	9,652
Interest rate	2,318,613	284,898	72,229	133,667
Total derivative notional contract amount	2,455,801	290,055	103,699	143,319

1 *Comprises financial instruments referencing other significant benchmark rates yet to transition to alternative benchmarks (euro Libor, Swiss franc Libor, Eonia, SOR, THBFIX, MIFOR and Sibor). Announcements were made by regulators during 2022 on the cessation of the Canadian dollar offered rate ('CDOR') and Mexican Interbank equilibrium interest rate ('TIIE'), which will eventually transition to the Canadian overnight repo rate average ('CORRA') and a new Mexican overnight fall-back rate, respectively. Therefore, CDOR and TIIE are also included in Others during the current period.*

2 *Gross carrying amount excluding allowances for expected credit losses.*

The amounts in the above table relate to HSBC's main operating entities where HSBC has material exposures impacted by Ibor reform, including in the UK, Hong Kong, France, the US, Mexico, Canada, Singapore, the UAE, Bermuda, Australia, Qatar, Germany, Thailand, India and Japan. The amounts provide an indication of the extent of the Group's exposure to the Ibor benchmarks that are due to be replaced. Amounts are in respect of financial instruments that:

- contractually reference an interest rate benchmark that is planned to transition to an alternative benchmark;
- have a contractual maturity date beyond the date by which the reference interest rate benchmark is expected to cease; and
- are recognised on HSBC's consolidated balance sheet.

Environmental, social and governance ('ESG') risk

We are subject to financial and non-financial risks associated with ESG-related matters. Our current areas of focus include climate risk, nature-related risks and human rights risks. These can impact us both directly and indirectly through our business activities and relationships. For details of how we govern ESG, see page 86.

Our assessment of climate risks covers three distinct time periods, comprising: short term, which is up to 2025; medium term, which is between 2026 and 2035; and long term, which is between 2036 and 2050. Focus on climate-related risk continued to increase over 2022, owing to the pace and volume of policy and regulatory changes globally, particularly on climate risk management, stress testing and scenario analysis and disclosures. If we fail to meet evolving regulatory expectations or requirements on climate risk management, this could have regulatory compliance and reputational impacts.

We could face direct impacts, owing to the increase in frequency and severity of weather events and chronic shifts in weather patterns, which could affect our ability to conduct our day-to-day operations.

Our customers may find that their business models fail to align to a net zero economy or face disruption to their operations or deterioration to their assets as a result of extreme weather.

We face increased reputational, legal and regulatory risk as we make progress towards our net zero ambition, with stakeholders likely to place greater focus on our actions such as the development of climate-related policies, our disclosures and financing and investment decisions relating to our ambition.

We will face additional risks if we are perceived to mislead stakeholders in respect of our climate strategy, the climate impact of a product or service, or the commitments of our customers. Climate risk may also impact on model risk, as the uncertain impacts of climate change and data and methodology limitations present challenges to creating reliable and accurate model outputs.

We also face reporting risk in relation to our climate disclosures, as any data, methodologies and standards we have used may evolve over time in line with market practice, regulation or owing to developments in climate science. While emissions reporting has improved over time, data remains of limited quality and consistency. The use of inconsistent or incomplete data and models could result in sub-optimal decision making. Any changes could result in revisions to our internal frameworks and reported data, and could mean that

reported figures are not reconcilable or comparable year on year. We may also have to re-evaluate our progress towards our climate-related targets in future and this could result in reputational, legal and regulatory risks.

There is increasing evidence that a number of nature-related risks beyond climate change, which include risks that can be represented more broadly by impact and dependence on nature, can and will have significant economic impact. These risks arise when the provision of natural services – such as water availability, air quality and soil quality – is compromised by overpopulation, urban development, natural habitat and ecosystem loss, ecosystem degradation arising from economic activity and other environmental stresses beyond climate change. They can show themselves in various ways, including through macroeconomic, market, credit, reputational, legal and regulatory risks, for both HSBC and our customers. We continue to engage with investors, regulators and customers on nature-related risks to evolve our approach and understand best practice risk mitigation.

Regulation and disclosure requirements in relation to human rights, and to modern slavery in particular, are increasing. Businesses are expected to be transparent about their efforts to identify and respond to the risk of negative human rights impacts arising from their business activities and relationships.

Mitigating actions

- We aim to deepen our understanding of the drivers of climate risk. A dedicated Climate Risk Oversight Forum is responsible for shaping and overseeing our approach and providing support in managing climate risk. For further details of the Group's ESG governance structure, see page 86.
- Our climate risk programme continues to support the development of our climate risk management capabilities across four key pillars: governance and risk appetite, risk management, stress testing and scenario analysis, and disclosures. We also aim to enhance our approach to greenwashing risk management.
- In December 2022, we published our updated policy covering the broader energy system including upstream oil and gas, oil and gas power generation, coal, hydrogen, renewables and hydropower, nuclear, biomass and energy from waste. We also expanded our thermal coal phase-out policy, in which we committed to not provide new finance or advisory services for the specific purposes of the conversion of existing coal-to-gas fired power plants, or new metallurgical coal mines (see page 65).
- Climate stress tests and scenarios are being used to further improve our understanding of our risk exposures for use in risk management and business decision making.
- In 2022, we reviewed our salient human rights issues following the methodology set out in the UNGPs. These are the human rights at risk of the most severe potential negative impact through our business activities and relationships. This review built on an earlier review that had identified modern slavery and discrimination as priority human rights issues. For further details, see page 87 of the ESG review.
- In 2021, we joined several industry working groups dedicated to helping us assess and manage nature-related risks, such as the Taskforce on Nature-related Financial Disclosures ('TNFD'). In 2022 our asset management business published its biodiversity policy to publicly explain how our analysts address nature-related issues.
- We continue to engage with our customers, investors and regulators proactively on the management of ESG risks. We also engage with initiatives, including the Climate Financial Risk Forum, Equator Principles, Task Force on Climate-related Financial Disclosures and CDP (formerly the Carbon Disclosure Project) to help drive best practice for climate risk management.

For further details of our approach to climate risk management, see 'Climate risk' on page 221.

For further details of ESG risk management, see 'Financial crime risk' on page 231 and 'Regulatory compliance risk environment including conduct' on page 225.

Our ESG review can be found on page 44.

Digitalisation and technological advances risk

Developments in technology and changes to regulations are enabling new entrants to the industry, particularly with respect to payments. This challenges us to continue innovating and taking advantage of new digital capabilities so that we improve how we serve our customers, drive efficiency and adapt our products to attract and retain customers. As a result, we may need to increase our investment in our business to adapt or develop products and services to respond to our customers' evolving needs. We also need to ensure that new digital capabilities do not weaken our resilience or wider risk management capabilities.

New technologies such as blockchain and quantum computing offer both business opportunities and potential risks for HSBC. As with all use of technologies, we aim to maximise their potential while seeking to ensure a robust control environment is in place to help manage the inherent risks, such as the impact on encryption algorithms.

Mitigating actions:

- We continue to monitor this emerging risk, as well as the advances in technology, and changes in customer behaviours to understand how these may impact our business.
- We assess new technologies to help develop appropriate controls and maintain resilience.
- We closely monitor and assess financial crime risk and the impact on payment transparency and architecture.

Internally driven

Risks associated with workforce capability, capacity and environmental factors with potential impact on growth

Our global businesses and functions in all of our markets are exposed to risks associated with workforce capacity challenges, including challenges to retain, develop and attract high-performing employees in key labour markets, and compliance with employment laws and regulations. Changed working arrangements, and the residual impact of local Covid-19-related restrictions and health concerns during the pandemic, have also affected employee mental health and well-being.

Mitigating actions

- We seek to promote a diverse and inclusive workforce and provide health and well-being support. We continue to build our speak-up culture through active campaigns.
- We monitor hiring activities and levels of employee attrition, with each business and function putting in place plans to help ensure they have effective workforce forecasting to meet business demands.
- We monitor people risks that could arise due to organisational restructuring, helping to ensure we manage redundancies sensitively and support impacted employees. We encourage our people leaders to focus on talent retention at all levels, with an empathetic mindset and approach, while ensuring the whole proposition of working at HSBC is well understood.
- Our Future Skills curriculum helps provides skills that will help to enable employees and HSBC to be successful in the future.
- We develop succession plans for key management roles, with oversight from the Group Executive Committee.

Risks arising from the receipt of services from third parties

We use third parties to provide a range of goods and services. Risks arising from the use of third-party providers and their supply chain may be harder to identify. It is critical that we ensure we have appropriate risk management policies, processes and practices over the selection, governance and oversight of third parties and their supply chain, particularly for key activities that could affect our operational resilience. Any deficiency in the management of risks associated with our third parties could affect our ability to support our customers and meet regulatory expectations.

Mitigating actions

- We continue to monitor the effectiveness of the controls operated by our third-party providers and request third-party control reports, where required. We have made further enhancements to our framework to help ensure risks associated with these arrangements are understood and managed effectively by our global businesses, global functions and regions.
- We continue to enhance the effective management of our intra-Group arrangements using the same control standards as we have for external third-party arrangements.
- We are implementing the changes required by new regulations as set by our regulators.

Model risk

Model risk arises whenever business decision making includes reliance on models. We use models in both financial and non-financial contexts, as well as in a range of business applications such as customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting. Assessing model performance is a continuous undertaking. Models can need redevelopment as market conditions change. Significant increases in global inflation and interest rates have impacted the reliability and accuracy of both credit and market risk models.

We continued to prioritise the redevelopment of internal ratings-based ('IRB') and internal model methods ('IMM') models, in relation to counterparty credit, as part of the IRB repair and Basel III programmes with a key focus on enhancing the quality of data used as model inputs. A number of these models have been submitted to the UK's Prudential Regulation Authority ('PRA') and other key regulators for feedback, and approval is in progress. Some IMM and internal model approach ('IMA') models have been approved for use, and feedback has been received for some IRB models. Climate risk modelling is a key focus for the Group as HSBC's commitment to ESG has become a key part of the Group's strategy.

Model risk remains a key area of focus given the regulatory scrutiny in this area, with local regulatory exams taking place in many jurisdictions and further developments in policy expected from many regulators, including the PRA.

Mitigating actions

- We have continued to embed the enhanced monitoring, review and challenge of expected credit loss model performance through our Model Risk Management function as part of a broader quarterly process to determine loss levels. The Model Risk Management team aims to provide effective review and challenge of any future redevelopment of these models.
- Model Risk Governance committees at the Group, business and functional levels continue to provide oversight of model risk.
- Model Risk Management works closely with businesses to ensure that IRB/IMM/IMA models in development meet risk management, pricing and capital management needs. Global Internal Audit provides assurance over the risk management framework for models.
- Additional assurance work is performed by the model risk governance teams, which act as second lines of defence. The teams test whether controls implemented by model users comply with model risk policy and if model risk standards are adequate.
- Models using advanced machine learning techniques are validated and monitored to help ensure that risks that are determined by the algorithms have adequate oversight and review. A framework to manage the range of risks that are generated by these advanced techniques, and to recognise the multidisciplinary nature of these risks, is being developed.

Data risk

We use multiple systems and growing quantities of data to support our customers. Risk arises if data is incorrect, unavailable, misused, or unprotected. Along with other banks and financial institutions, we need to meet external regulatory obligations and laws that cover data, such as the Basel Committee on Banking Supervision's 239 guidelines and the General Data Protection Regulation ('GDPR').

Mitigating actions

- Through our global data management framework, we monitor the quality, availability and security of data that supports our customers and internal processes. We work towards resolving any identified data issues in a timely manner.
- We have made improvements to our data policies. We are implementing an updated control framework (which includes trusted sources, data flows and data quality) in order to enhance the end-to-end management of data risk.
- We have established a global data management utility, and continue to simplify and unify data management activities across the Group.
- We seek to protect customer data through our data privacy framework, which establishes practices, design principles and guidelines that enable us to demonstrate compliance with data privacy laws and regulations.
- We continue to modernise our data and analytics infrastructure through investments in Cloud technology, data visualisation, machine learning and artificial intelligence.
- We continue to educate our employees on data risk and data management. We have delivered regular mandatory training globally on how to protect and manage data appropriately.

Change execution risk

We have continued investment in strategic change to support the delivery of our strategic priorities and regulatory commitments. This requires change to be executed safely and efficiently.

Mitigating actions

- In 2022, we added change execution risk to our risk taxonomy and control library, so that it could be defined, assessed, managed, reported and overseen in the same way as our other material risks.
- The Transformation Oversight Executive Committee oversees the prioritisation, strategic alignment and management of execution risk for all change portfolios and initiatives.

Areas of special interest

During 2022, a number of areas were identified and considered as part of our top and emerging risks because of the effect they may have on the Group. While considered under the themes captured under top and emerging risks, in this section we have placed a particular focus on the Covid-19 pandemic.

Risks related to Covid-19

The impact from the Covid-19 pandemic remains a continuing risk to our customers and organisation. However, the appetite for public health restrictions has reduced following the successful roll-out of vaccine programmes, and as societies have adapted. Countries continue to differ in their approach, although China has recently reversed restrictions on activity and mobility.

In most countries, high vaccination rates and acquired population immunity have minimised the public health risks and the need for restrictions. However, in mainland China and Hong Kong, adherence to public health restrictions had adverse economic implications throughout much of 2022. Government-imposed restrictions on activity in major Chinese cities, and restrictions on travel, adversely affected global tourism and supply chains.

While the recovery in China resulting from the relaxation of Covid-19 related restrictions on movement, international travel and tourism in China that commenced in December 2022, raises the prospect of global growth, it could also lead to renewed inflationary pressures as demand for commodities and other goods rises. However, there are still short-term risks, as any surge in Covid-19 infections in China may dampen confidence and activity, and lead to the emergence of new vaccine-resistant variants of the virus.

We continue to monitor the situation closely, and given the continuing uncertainties related to the post-pandemic landscape, additional mitigating actions may be required.

Our material banking risks

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables:

Description of risks – banking operations

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk (see page 145)		
Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	Credit risk arises principally from direct lending, trade finance and leasing business, but also from other products such as guarantees and derivatives.	Credit risk is: • measured as the amount that could be lost if a customer or counterparty fails to make repayments; • monitored using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and • managed through a robust risk control framework, which outlines clear and consistent policies, principles and guidance for risk managers.
Treasury risk (see page 202)		
Treasury risk is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural and transactional foreign exchange exposures and changes in market interest rates, together with pension and insurance risk.	Treasury risk arises from changes to the respective resources and risk profiles driven by customer behaviour, management decisions or the external environment.	Treasury risk is: • measured through risk appetite and more granular limits, set to provide an early warning of increasing risk, minimum ratios of relevant regulatory metrics, and metrics to monitor the key risk drivers impacting treasury resources; • monitored and projected against appetites and by using operating plans based on strategic objectives together with stress and scenario testing; and • managed through control of resources in conjunction with risk profiles, strategic objectives and cash flows.
Market risk (see page 218)		
Market risk is the risk of an adverse financial impact on trading activities arising from changes in market parameters such as interest rates, foreign exchange rates, asset prices, volatilities, correlations and credit spreads.	Exposure to market risk is separated into two portfolios: trading portfolios and non-trading portfolios. Market risk for non-trading portfolios is discussed in the Treasury risk section on page 214. Market risk exposures arising from our insurance operations are discussed on page 237.	Market risk is: • measured using sensitivities, value at risk and stress testing, giving a detailed picture of potential gains and losses for a range of market movements and scenarios, as well as tail risks over specified time horizons; • monitored using value at risk, stress testing and other measures; and • managed using risk limits approved by the Group Risk Management Meeting and the risk management meetings in various global businesses.

Description of risks – banking operations (continued)

Risks	Arising from	Measurement, monitoring and management of risk
Climate risk (see page 221)		
Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a greener economy.	Climate risk can materialise through: • physical risk, which arises from the increased frequency and severity of weather events; • transition risk, which arises from the process of moving to a low-carbon economy; and • greenwashing risk, which arises from the act of knowingly or unknowingly misleading stakeholders regarding our strategy relating to climate, the climate impact/benefits of a product or service, or the climate commitments or performance of our customers.	Climate risk is: • measured using a variety of risk appetite metrics and key management indicators, which assess the impact of climate risk across the risk taxonomy; • monitored using stress testing; and • managed through adherence to risk appetite thresholds and via specific policies.
Resilience risk (see page 230)		
Resilience risk is the risk of sustained and significant business disruption from execution, delivery, physical security or safety events, causing the inability to provide critical services to our customers, affiliates, and counterparties.	Resilience risk arises from failures or inadequacies in processes, people, systems or external events.	Resilience risk is: • measured using a range of metrics with defined maximum acceptable impact tolerances, and against our agreed risk appetite; • monitored through oversight of enterprise processes, risks, controls and strategic change programmes; and • managed by continual monitoring and thematic reviews.
Regulatory compliance risk (see page 231)		
Regulatory compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching related financial services regulatory standards.	Regulatory compliance risk arises from the failure to observe relevant laws, codes, rules and regulations and can manifest itself in poor market or customer outcomes and lead to fines, penalties and reputational damage to our business.	Regulatory compliance risk is: • measured by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our regulatory compliance teams; • monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
Financial crime risk (see page 231)		
Financial crime risk is the risk that HSBC's products and services will be exploited for criminal activity. This includes fraud, bribery and corruption, tax evasion, sanctions and export control violations, money laundering, terrorist financing and proliferation financing.	Financial crime risk arises from day-to-day banking operations involving customers, third parties and employees.	Financial crime risk is: • measured by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement of, and assessment by, our compliance teams; • monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
Model risk (see page 232)		
Model risk is the risk of inappropriate or incorrect business decisions arising from the use of models that have been inadequately designed, implemented or used, or from models that do not perform in line with expectations and predictions.	Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.	Model risk is: • measured by reference to model performance tracking and the output of detailed technical reviews, with key metrics including model review statuses and findings; • monitored against model risk appetite statements, insight from the independent review function, feedback from internal and external audits, and regulatory reviews; and • managed by creating and communicating appropriate policies, procedures and guidance, training colleagues in their application, and supervising their adoption to ensure operational effectiveness.

Our insurance manufacturing subsidiaries are regulated separately from our banking operations. Risks in our insurance entities are managed using methodologies and processes that are subject to Group oversight. Our insurance operations are also subject to many of the same risks as our banking operations, and these are covered by the Group's risk management processes. However, there are specific risks inherent to the insurance operations as noted below.

Description of risks – insurance manufacturing operations		
Risks	Arising from	Measurement, monitoring and management of risk
Financial risk (see page 237)		
For insurance entities, financial risk includes the risk of not being able to effectively match liabilities arising under insurance contracts with appropriate investments and that the expected sharing of financial performance with policyholders under certain contracts is not possible.	Exposure to financial risk arises from: • market risk affecting the fair values of financial assets or their future cash flows; • credit risk; and • liquidity risk of entities being unable to make payments to policyholders as they fall due.	Financial risk is: • measured for credit risk, in terms of economic capital and the amount that could be lost if a counterparty fails to make repayments; for market risk, in terms of economic capital, internal metrics and fluctuations in key financial variables; and for liquidity risk, in terms of internal metrics including stressed operational cash flow projections; • monitored through a framework of approved limits and delegated authorities; and • managed through a robust risk control framework, which outlines clear and consistent policies, principles and guidance. This includes using product design, asset liability matching and bonus rates.
Insurance risk (see page 238)		
Insurance risk is the risk that, over time, the cost of insurance policies written, including claims and benefits, may exceed the total amount of premiums and investment income received.	The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, as well as lapse and surrender rates.	Insurance risk is: • measured in terms of life insurance liabilities and economic capital allocated to insurance underwriting risk; • monitored through a framework of approved limits and delegated authorities; and • managed through a robust risk control framework, which outlines clear and consistent policies, principles and guidance. This includes using product design, underwriting, reinsurance and claims-handling procedures.

Credit risk

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Overview

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. Credit risk arises principally from direct lending, trade finance and leasing business, but also from other products such as guarantees and derivatives.

Credit risk management

Key developments in 2022

There were no material changes to the policies and practices for the management of credit risk in 2022. We continued to apply the requirements of IFRS 9 'Financial Instruments' within the Credit Risk sub-function. For certain retail portfolios, we enhanced the significant increase in credit risk ('SICR') approach in relation to capturing relative movements in probability of default ('PD') since origination.

For our retail portfolios, we adopted the EBA 'Guidelines on the application of definition of default' during 2022 and, for our wholesale portfolios, these guidelines were adopted during 2021. Adoption of these guidelines did not have a material impact on our portfolios and comparative disclosures have not been restated.

We actively managed the risks related to macroeconomic uncertainties, including inflation, fiscal and monetary policy, the Russia-Ukraine war, broader geopolitical uncertainties, and the continued risks resulting from the Covid-19 pandemic.

For further details, see 'Top and emerging risks' on page 135.

Governance and structure

We have established Group-wide credit risk management and related IFRS 9 processes. We continue to assess the impact of economic developments in key markets on specific customers, customer segments or portfolios. As credit conditions change, we take mitigating actions, including the revision of risk appetites or limits and tenors, as appropriate. In addition, we continue to evaluate the terms under which we provide credit facilities within the context of individual customer requirements, the quality of the relationship, local regulatory requirements, market practices and our local market position.

Credit Risk sub-function

(Audited)

Credit approval authorities are delegated by the Board to the Group Chief Executive together with the authority to sub-delegate them. The Credit Risk sub-function in Group Risk and Compliance is responsible for the key policies and processes for managing credit risk, which include formulating Group credit policies and risk rating frameworks, guiding the Group's appetite for credit risk exposures, undertaking independent reviews and objective assessment of credit risk, and monitoring performance and management of portfolios.

The principal objectives of our credit risk management are:

- to maintain across HSBC a strong culture of responsible lending, and robust risk policies and control frameworks;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

Key risk management processes

IFRS 9 'Financial Instruments' process

The IFRS 9 process comprises three main areas: modelling and data; implementation; and governance.

Modelling, data and forward economic guidance

We have established IFRS 9 modelling and data processes in various geographies, which are subject to internal model risk governance including independent review of significant model developments.

We have a centralised process for generating unbiased and independent global economic scenarios. Scenarios are subject to a process of review and challenge by a dedicated team, as well as regional groupings. Each quarter, the scenarios and probability weights are reviewed and checked for consistency with the economic conjuncture and current economic and financial risks. These are subject to final review and approval by senior management in a Forward Economic Guidance Global Business Impairment Committee.

Implementation

A centralised impairment engine performs the expected credit losses calculation using data, which is subject to a number of validation checks and enhancements, from a variety of client, finance and risk systems. Where possible, these checks and processes are performed in a globally consistent and centralised manner.

Governance

Regional management review forums are established in key sites and regions in order to review and approve the impairment results. Regional management review forums have representatives from Credit Risk and Finance. The key site and regional approvals are reported up to the relevant global business impairment committee for final approval of the Group's ECL for the period. Required members of the committee are the Wholesale Global Chief Corporate Credit Officer and Chief Risk Officer for Wealth and Personal Banking Risk, as well as the relevant global business Chief Financial Officer and the Global Financial Controller.

Concentration of exposure

(Audited)

Concentrations of credit risk arise when a number of counterparties or exposures have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimise undue concentration of exposure in our portfolios across industries, countries and global businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

Credit quality of financial instruments

(Audited)

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the Group to support the calculation of our minimum credit regulatory capital requirement. The five credit quality classifications encompass a range of granular internal credit rating grades assigned to wholesale and retail

customers, and the external ratings attributed by external agencies to debt securities.

For debt securities and certain other financial instruments, external ratings have been aligned to the five quality classifications based upon the mapping of related customer risk rating ('CRR') to external credit rating.

Wholesale lending

The CRR 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All corporate customers are rated using the 10- or 23-grade scale, depending on the degree of sophistication of the Basel approach adopted for the exposure.

Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time.

Retail lending

Retail lending credit quality is based on a 12-month point-in-time probability-weighted PD.

Credit quality classification

	Sovereign debt securities and bills	Other debt securities and bills	Wholesale lending and derivatives		Retail lending	
	External credit rating	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12 month probability-weighted PD %
Quality classification[1,2]						
Strong	BBB and above	A- and above	CRR 1 to CRR 2	0–0.169	Band 1 and 2	0.000–0.500
Good	BBB- to BB	BBB+ to BBB-	CRR 3	0.170–0.740	Band 3	0.501–1.500
Satisfactory	BB- to B and unrated	BB+ to B and unrated	CRR 4 to CRR 5	0.741–4.914	Band 4 and 5	1.501–20.000
Sub-standard	B- to C	B- to C	CRR 6 to CRR 8	4.915–99.999	Band 6	20.001–99.999
Credit impaired	Default	Default	CRR 9 to CRR 10	100	Band 7	100

1 Customer risk rating ('CRR').
2 12-month point-in-time probability-weighted probability of default ('PD').

Quality classification definitions

- 'Strong' exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss.
- 'Good' exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk.
- 'Satisfactory' exposures require closer monitoring and demonstrate an average-to-fair capacity to meet financial commitments, with moderate default risk.
- 'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern.
- 'Credit-impaired' exposures have been assessed as described on Note 1.2(i) on the financial statements.

Forborne loans and advances

(Audited)

Forbearance measures consist of concessions towards an obligor that is experiencing or about to experience difficulties in meeting its financial commitments.

We continue to class loans as forborne when we modify the contractual payment terms due to having significant concerns about the borrowers' ability to meet contractual payments when they were due.

In 2022, we expanded our definition of forborne to capture non-payment-related concessions, such as covenant waivers. For our wholesale portfolio, we began identifying non-payment-related concessions in 2021 when our internal policies were changed. For our retail portfolios, we began identifying them during 2022.

The comparative disclosures have been presented under the prior definition of forborne for the wholesale and retail portfolios.

For details of our policy on forbearance, see Note 1.2(i) in the financial statements.

Credit quality of forborne loans

For wholesale lending, where payment-related forbearance measures result in a diminished financial obligation, or if there are other indicators of impairment, the loan will be classified as credit impaired if it is not already so classified. All facilities with a customer, including loans that have not been modified, are considered credit impaired following the identification of a payment-related forborne loan. For retail lending, where a material payment-related concession has been granted, the loan will be classified as credit impaired. In isolation, non-payment forbearance measures may not result in the loan being classified as credit impaired unless combined with other indicators of credit impairment. These are classed as performing forborne loans for both wholesale and retail lending.

Wholesale and retail lending forborne loans are classified as credit impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period, and there are no other indicators of impairment. Any forborne loans not considered credit impaired will remain forborne for a minimum of two years from the date that credit impairment no longer applies. For wholesale and retail lending, any forbearance measures granted on a loan already classed as forborne results in the customer being classed as credit impaired.

Forborne loans and recognition of expected credit losses

(Audited)

Forborne loans expected credit loss assessments reflect the higher rates of losses typically experienced with these types of loans such that they are in stage 2 and stage 3. The higher rates are more pronounced in unsecured retail lending requiring further segmentation. For wholesale lending, forborne loans are typically assessed individually. Credit risk ratings are intrinsic to the impairment assessments. The individual impairment assessment takes into account the higher risk of the future non-payment inherent in forborne loans.

Impairment assessment

(Audited)

For details of our impairment policies on loans and advances and financial investments, see Note 1.2(i) on the financial statements.

Write-off of loans and advances

(Audited)

For details of our policy on the write-off of loans and advances, see Note 1.2(i) on the financial statements.

Unsecured personal facilities, including credit cards, are generally written off at between 150 and 210 days past due. The standard period runs until the end of the month in which the account becomes 180 days contractually delinquent. However, in exceptional circumstances to achieve a fair customer outcome, and in line with regulatory expectations, they may be extended further.

For secured facilities, write-off should occur upon repossession of collateral, receipt of proceeds via settlement, or determination that recovery of the collateral will not be pursued.

Any secured assets maintained on the balance sheet beyond 60 months of consecutive delinquency-driven default require additional monitoring and review to assess the prospect of recovery.

There are exceptions in a few countries and territories where local regulation or legislation constrains earlier write-off, or where the realisation of collateral for secured real estate lending takes more time. Write-off, either partially or in full, may be earlier when there is no reasonable expectation of further recovery, for example, in the event of a bankruptcy or equivalent legal proceedings. Collection procedures may continue after write-off.

Credit risk in 2022

At 31 December 2022, gross loans and advances to customers and banks of $1,041bn decreased by $99.1bn, compared with 31 December 2021. This included adverse foreign exchange movements of $59.2bn and an $81.2bn decrease due to a reclassification of businesses to assets held for sale, including our banking business in Canada and our retail banking operations in France.

Excluding foreign exchange movements, the underlying decrease of $39.9bn was driven by a $36.1bn decrease in personal loans and advances to customers and by a $29.9bn decrease in wholesale loans and advances to customers. These were partly offset by a $25.9bn increase in loans and advances to banks.

The underlying decrease in personal loans and advances to customers was driven by the $50.1bn reclassification of businesses to assets held for sale, and by a decrease in other personal lending, mainly in Hong Kong (down $1.5bn). This was offset by mortgage growth of $15.4bn, mainly in the UK (up $8.9bn), Hong Kong (up $3.4bn) and Australia (up $1.6bn).

The underlying increase in loans and advances to banks was driven by growth in the UK (up $10.6bn), Hong Kong (up $7.9bn) and Egypt (up $1.9bn), driven mainly by higher central bank placements.

At 31 December 2022, the allowance for ECL of $12.6bn increased by $0.5bn compared with 31 December 2021, including favourable foreign exchange movements of $0.6bn and the effect of reclassifications to assets held for sale of $0.4bn. The $12.6bn allowance comprised $12.1bn in respect of assets held at amortised cost, $0.4bn in respect of loan commitments and financial guarantees, and $0.1bn in respect of debt instruments measured at fair value through other comprehensive income ('FVOCI').

Excluding foreign exchange movements, the allowance for ECL in relation to loans and advances to customers increased by $0.6bn from 31 December 2021. This was attributable to:

- a $0.7bn increase in wholesale loans and advances to customers, of which $0.7bn was driven by stage 3; and
- a $0.1bn decrease in personal loans and advances to customers, of which $0.4bn was driven by stage 3, partly offset by an increase of $0.3bn in stages 1 and 2.

Stage 3 balances at 31 December 2022 increased by $1.9bn from 31 December 2021. This was driven by a $3.2bn increase in wholesale loans and advances to customers, mainly in corporate real estate portfolios in Hong Kong. This was partly offset by a decrease of $1.3bn in personal loans and advances to customers.

At 31 December 2022, for certain retail lending portfolios, we introduced enhancements in the significant increase in credit risk ('SICR') approach in relation to capturing relative movements in probability of default ('PD'). The enhanced approach captured relative movements in PD since origination, which resulted in a significant migration to stage 2 from loans to customers gross carrying amounts in stage 1.

The volume of stage 1 customer accounts with lower absolute levels of credit risk who have exhibited some amount of relative increase in PD since origination have migrated into stage 2, and accounts originated with higher absolute levels of credit risk with no or insignificant increases in PD since origination have been transferred to stage 1, with no material overall change in risk.

The impact on ECL is immaterial due to the offsetting ECL impacts of stage migrations and due to the low loan-to-value ('LTV') profiles. This is particularly applicable to UK customers.

The enhancement of the SICR approach constitutes an improvement towards more responsive models that better reflect the SICR since origination. This includes consideration of the current cost of living pressures, as markets adjust to the higher interest-rate environment.

In wholesale lending, China's commercial real estate sector continued to deteriorate in 2022, resulting in further stage 2 allowances on downgrades and new and additional stage 3 charges.

The ECL charge for 2022 was $3.6bn, inclusive of recoveries. This was driven by higher ECL charges relating to increasing inflationary pressures, rising interest rates, China commercial real estate exposures and economic uncertainty, partly offset by a release in Covid-19-related allowances at the beginning of the year.

The ECL charge comprised: $2.4bn in respect of wholesale lending, of which $1.7bn were in stage 3 and purchased or originated credit impaired ('POCI'); $1.1bn in respect of personal lending, of which $0.5bn were in stage 3; and $0.1bn in respect of debt instruments measured at FVOCI.

Income statement movements are analysed further on page 101.

While credit risk arises across most of our balance sheet, ECL have typically been recognised on loans and advances to customers and banks, in addition to securitisation exposures and other structured products. As a result, our disclosures focus primarily on these two areas. For further details of:

- maximum exposure to credit risk, see page 153;
- measurement uncertainty and sensitivity analysis of ECL estimates, see page 153;
- reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees, see page 162;
- credit quality, see page 165;
- total wholesale lending for loans and advances to banks and customers by stage distribution, see page 171;
- wholesale lending collateral, see page 180;
- total personal lending for loans and advances to customers at amortised cost by stage distribution, see page 188; and
- personal lending collateral, see page 193.

Summary of credit risk

The following disclosure presents the gross carrying/nominal amount of financial instruments to which the impairment requirements in IFRS 9 are applied and the associated allowance for ECL.

Summary of financial instruments to which the impairment requirements in IFRS 9 are applied

(Audited)

	31 Dec 2022		At 31 Dec 2021	
	Gross carrying/ nominal amount	**Allowance for ECL[1]**	Gross carrying/ nominal amount	Allowance for ECL[1]
	$m	**$m**	$m	$m
Loans and advances to customers at amortised cost	**936,307**	**(11,453)**	1,057,231	(11,417)
– personal	**415,012**	**(2,872)**	478,337	(3,103)
– corporate and commercial	**454,356**	**(8,324)**	513,539	(8,204)
– non-bank financial institutions	**66,939**	**(257)**	65,355	(110)
Loans and advances to banks at amortised cost	**104,951**	**(69)**	83,153	(17)
Other financial assets measured at amortised cost	**1,014,498**	**(553)**	880,351	(193)
– cash and balances at central banks	**327,005**	**(3)**	403,022	(4)
– items in the course of collection from other banks	**7,297**	**—**	4,136	—
– Hong Kong Government certificates of indebtedness	**43,787**	**—**	42,578	—
– reverse repurchase agreements – non-trading	**253,754**	**—**	241,648	—
– financial investments	**168,827**	**(80)**	97,364	(62)
– assets held for sale[2]	**102,556**	**(415)**	2,859	(43)
– prepayments, accrued income and other assets[3]	**111,272**	**(55)**	88,744	(84)
Total gross carrying amount on-balance sheet	**2,055,756**	**(12,075)**	2,020,735	(11,627)
Loans and other credit-related commitments	**618,788**	**(386)**	627,637	(379)
– personal	**244,006**	**(27)**	239,685	(39)
– corporate and commercial	**269,187**	**(340)**	283,625	(325)
– financial	**105,595**	**(19)**	104,327	(15)
Financial guarantees	**18,783**	**(52)**	27,795	(62)
– personal	**1,135**	**—**	1,130	—
– corporate and commercial	**13,587**	**(50)**	22,355	(58)
– financial	**4,061**	**(2)**	4,310	(4)
Total nominal amount off-balance sheet[4]	**637,571**	**(438)**	655,432	(441)
	2,693,327	**(12,513)**	2,676,167	(12,068)

	Fair value	**Memorandum allowance for ECL[5]**	Fair value	Memorandum allowance for ECL[5]
	$m	**$m**	$m	$m
Debt instruments measured at fair value through other comprehensive income ('FVOCI')	**266,303**	**(145)**	347,203	(96)

1 *The total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.*
2 *For further details on gross carrying amounts and allowances for ECL related to assets held for sale, see 'Assets held for sale' on page 151.*
3 *Includes only those financial instruments that are subject to the impairment requirements of IFRS 9. 'Prepayments, accrued income and other assets' as presented within the consolidated balance sheet on page 326 comprises both financial and non-financial assets, including cash collateral and settlement accounts.*
4 *Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.*
5 *Debt instruments measured at FVOCI continue to be measured at fair value with the allowance for ECL as a memorandum item. Change in ECL is recognised in 'Change in expected credit losses and other credit impairment charges' in the income statement.*

The following table provides an overview of the Group's credit risk by stage and industry, and the associated ECL coverage. The financial assets recorded in each stage have the following characteristics:

- Stage 1: These financial assets are unimpaired and without significant increase in credit risk on which a 12-month allowance for ECL is recognised.
- Stage 2: A significant increase in credit risk has been experienced on these financial assets since initial recognition for which a lifetime ECL is recognised.
- Stage 3: There is objective evidence of impairment and the financial assets are therefore considered to be in default or otherwise credit impaired on which a lifetime ECL is recognised.
- POCI: Financial assets that are purchased or originated at a deep discount are seen to reflect the incurred credit losses on which a lifetime ECL is recognised.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector at 31 December 2022

(Audited)

	Gross carrying/nominal amount[1]					Allowance for ECL					ECL coverage %				
	Stage 1	Stage 2	Stage 3	POCI[2]	Total	Stage 1	Stage 2	Stage 3	POCI[2]	Total	Stage 1	Stage 2	Stage 3	POCI[2]	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	%	%	%	%	%
Loans and advances to customers at amortised cost	777,543	139,130	19,505	129	936,307	(1,095)	(3,491)	(6,829)	(38)	(11,453)	0.1	2.5	35.0	29.5	1.2
– personal	362,781	48,891	3,340	—	415,012	(562)	(1,505)	(805)	—	(2,872)	0.2	3.1	24.1	—	0.7
– corporate and commercial	353,010	85,521	15,696	129	454,356	(490)	(1,909)	(5,887)	(38)	(8,324)	0.1	2.2	37.5	29.5	1.8
– non-bank financial institutions	61,752	4,718	469	—	66,939	(43)	(77)	(137)	—	(257)	0.1	1.6	29.2	—	0.4
Loans and advances to banks at amortised cost	103,042	1,827	82	—	104,951	(18)	(29)	(22)	—	(69)	—	1.6	26.8	—	0.1
Other financial assets measured at amortised cost	996,489	17,166	797	46	1,014,498	(124)	(188)	(234)	(7)	(553)	—	1.1	29.4	15.2	0.1
Loan and other credit-related commitments	583,383	34,033	1,372	—	618,788	(141)	(180)	(65)	—	(386)	—	0.5	4.7	—	0.1
– personal	239,521	3,686	799	—	244,006	(26)	(1)	—	—	(27)	—	—	—	—	—
– corporate and commercial	241,313	27,323	551	—	269,187	(111)	(166)	(63)	—	(340)	—	0.6	11.4	—	0.1
– financial	102,549	3,024	22	—	105,595	(4)	(13)	(2)	—	(19)	—	0.4	9.1	—	—
Financial guarantees	16,071	2,463	249	—	18,783	(6)	(13)	(33)	—	(52)	—	0.5	13.3	—	0.3
– personal	1,123	11	1	—	1,135	—	—	—	—	—	—	—	—	—	—
– corporate and commercial	11,547	1,793	247	—	13,587	(5)	(12)	(33)	—	(50)	—	0.7	13.4	—	0.4
– financial	3,401	659	1	—	4,061	(1)	(1)	—	—	(2)	—	0.2	—	—	—
At 31 Dec 2022	2,476,528	194,619	22,005	175	2,693,327	(1,384)	(3,901)	(7,183)	(45)	(12,513)	0.1	2.0	32.6	25.7	0.5

1 *Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.*
2 *Purchased or originated credit-impaired ('POCI').*

Unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when they are 30 days past due ('DPD') and are transferred from stage 1 to stage 2. The following disclosure presents the ageing of stage 2 financial assets by those less than 30 days and greater than 30 DPD and therefore presents those financial assets classified as stage 2 due to ageing (30 DPD) and those identified at an earlier stage (less than 30 DPD).

Stage 2 days past due analysis at 31 December 2022

(Audited)

	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*
	$m	*$m*	*$m*	*$m*	$m	*$m*	*$m*	*$m*	%	*%*	*%*	*%*
Loans and advances to customers at amortised cost	139,130	*134,733*	*2,411*	*1,986*	(3,491)	*(3,019)*	*(234)*	*(238)*	2.5	*2.2*	*9.7*	*12.0*
– personal	48,891	*46,402*	*1,683*	*806*	(1,505)	*(1,080)*	*(214)*	*(211)*	3.1	*2.3*	*12.7*	*26.2*
– corporate and commercial	85,521	*84,005*	*712*	*804*	(1,909)	*(1,862)*	*(20)*	*(27)*	2.2	*2.2*	*2.8*	*3.4*
– non-bank financial institutions	4,718	*4,326*	*16*	*376*	(77)	*(77)*	—	—	1.6	*1.8*	—	—
Loans and advances to banks at amortised cost	1,827	*1,817*	—	*10*	(29)	*(29)*	—	—	1.6	*1.6*	—	—
Other financial assets measured at amortised cost	17,166	*16,930*	*140*	*96*	(188)	*(164)*	*(8)*	*(16)*	1.1	*1.0*	*5.7*	*16.7*

1 *Days past due ('DPD').*
2 *The days past due amounts presented above are on a contractual basis and include the benefit of any customer relief payment holidays granted.*

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector at 31 December 2021 (continued)

(Audited)

	Gross carrying/nominal amount[1]					Allowance for ECL					ECL coverage %				
	Stage 1	Stage 2	Stage 3	POCI[2]	Total	Stage 1	Stage 2	Stage 3	POCI[2]	Total	Stage 1	Stage 2	Stage 3	POCI[2]	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	%	%	%	%	%
Loans and advances to customers at amortised cost	918,936	119,224	18,797	274	1,057,231	(1,367)	(3,119)	(6,867)	(64)	(11,417)	0.1	2.6	36.5	23.4	1.1
– personal	456,956	16,439	4,942	—	478,337	(658)	(1,219)	(1,226)	—	(3,103)	0.1	7.4	24.8	—	0.6
– corporate and commercial	400,894	98,911	13,460	274	513,539	(665)	(1,874)	(5,601)	(64)	(8,204)	0.2	1.9	41.6	23.4	1.6
– non-bank financial institutions	61,086	3,874	395	—	65,355	(44)	(26)	(40)	—	(110)	0.1	0.7	10.1	—	0.2
Loans and advances to banks at amortised cost	81,636	1,517	—	—	83,153	(14)	(3)	—	—	(17)	—	0.2	—	—	—
Other financial assets measured at amortised cost	875,016	4,988	304	43	880,351	(91)	(54)	(42)	(6)	(193)	—	1.1	13.8	14.0	—
Loan and other credit-related commitments	594,473	32,389	775	—	627,637	(165)	(174)	(40)	—	(379)	—	0.5	5.2	—	0.1
– personal	237,770	1,747	168	—	239,685	(37)	(2)	—	—	(39)	—	0.1	—	—	—
– corporate and commercial	254,750	28,269	606	—	283,625	(120)	(165)	(40)	—	(325)	—	0.6	6.6	—	0.1
– financial	101,953	2,373	1	—	104,327	(8)	(7)	—	—	(15)	—	0.3	—	—	—
Financial guarantees	24,932	2,638	225	—	27,795	(11)	(30)	(21)	—	(62)	—	1.1	9.3	—	0.2
– personal	1,114	15	1	—	1,130	—	—	—	—	—	—	—	—	—	—
– corporate and commercial	20,025	2,107	223	—	22,355	(10)	(28)	(20)	—	(58)	—	1.3	9.0	—	0.3
– financial	3,793	516	1	—	4,310	(1)	(2)	(1)	—	(4)	—	0.4	100.0	—	0.1
At 31 Dec 2021	2,494,993	160,756	20,101	317	2,676,167	(1,648)	(3,380)	(6,970)	(70)	(12,068)	0.1	2.1	34.7	22.1	0.5

1 *Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.*
2 *Purchased or originated credit-impaired ('POCI').*

Stage 2 days past due analysis at 31 December 2021 (continued)

(Audited)

	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*	Stage 2	*Up-to-date*	*1 to 29 DPD[1,2]*	*30 and > DPD[1,2]*
	$m	*$m*	*$m*	*$m*	$m	*$m*	*$m*	*$m*	%	*%*	*%*	*%*
Loans and advances to customers at amortised cost	119,224	*115,350*	*2,193*	*1,681*	(3,119)	*(2,732)*	*(194)*	*(193)*	2.6	*2.4*	*8.8*	*11.5*
– personal	16,439	*14,124*	*1,387*	*928*	(1,219)	*(884)*	*(160)*	*(175)*	7.4	*6.3*	*11.5*	*18.9*
– corporate and commercial	98,911	*97,388*	*806*	*717*	(1,874)	*(1,822)*	*(34)*	*(18)*	1.9	*1.9*	*4.2*	*2.5*
– non-bank financial institutions	3,874	*3,838*	—	*36*	(26)	*(26)*	—	—	0.7	*0.7*	—	—
Loans and advances to banks at amortised cost	1,517	*1,517*	—	—	(3)	*(3)*	—	—	0.2	*0.2*	—	—
Other financial assets measured at amortised cost	4,988	*4,935*	*22*	*31*	(54)	*(47)*	*(4)*	*(3)*	1.1	*1.0*	*18.2*	*9.7*

1 *Days past due ('DPD').*
2 *The days past due amounts presented above are on a contractual basis and include the benefit of any customer relief payment holidays granted.*

Stage 2 decomposition

The following table presents the stage 2 decomposition of gross carrying amount and allowances for ECL for loans and advances to customers. It also sets out the reasons why an exposure is classified as stage 2 and therefore presented as a significant increase in credit risk at 31 December 2022.

The quantitative classification shows gross carrying values and allowances for ECL for which the applicable reporting date probability of default ('PD') measure exceeds defined quantitative thresholds for retail and wholesale exposures, as set out in Note 1.2 'Summary of significant accounting policies', on page 342.

The qualitative classification primarily accounts for CRR deterioration, watch-and-worry and retail management judgemental adjustments.

A summary of our current policies and practices for the significant increase in credit risk is set out in 'Summary of significant accounting policies' on page 342.

Loans and advances to customers[1]

	At 31 Dec 2022								
	Gross carrying amount				Allowance for ECL				ECL coverage
	Personal	Corporate and commercial	Non-bank financial institutions	Total	Personal	Corporate and commercial	Non-bank financial institutions	Total	Total
	$m	$m	$m	$m	$m	$m	$m	$m	%
Quantitative	**41,611**	**66,450**	**3,679**	**111,740**	**(1,301)**	**(1,644)**	**(66)**	**(3,011)**	**2.7**
Qualitative	**7,233**	**18,555**	**878**	**26,666**	**(201)**	**(262)**	**(11)**	**(474)**	**1.8**
30 DPD backstop[2]	**47**	**516**	**161**	**724**	**(3)**	**(3)**	**—**	**(6)**	**0.8**
Total stage 2	**48,891**	**85,521**	**4,718**	**139,130**	**(1,505)**	**(1,909)**	**(77)**	**(3,491)**	**2.5**
	At 31 Dec 2021								
Quantitative	9,907	68,000	3,041	80,948	(1,076)	(1,347)	(19)	(2,442)	3.0
Qualitative	6,329	30,326	818	37,473	(134)	(520)	(7)	(661)	1.8
30 DPD backstop[2]	203	585	15	803	(9)	(7)	—	(16)	2.0
Total stage 2	16,439	98,911	3,874	119,224	(1,219)	(1,874)	(26)	(3,119)	2.6

1 *Where balances satisfy more than one of the above three criteria for determining a significant increase in credit risk, the corresponding gross exposure and ECL have been assigned in order of categories presented.*
2 *Days past due ('DPD').*

Assets held for sale

(Audited)

During 2022, gross loans and advances and related impairment allowances were reclassified from 'loans and advances to customers' and 'loans and advances to banks' to 'assets held for sale' in the balance sheet.

At 31 December 2022, the most material balances held for sale came from our banking business in Canada and from our retail banking operations in France.

Disclosures relating to assets held for sale are provided in the following credit risk tables, primarily where the disclosure is relevant to the measurement of these financial assets:

- 'Maximum exposure to credit risk' (page 153);
- 'Distribution of financial instruments by credit quality at 31 December' (page 165);

Although there was a reclassification on the balance sheet, there was no separate income statement reclassification. As a result, charges for changes in expected credit losses and other credit impairment charges shown in the credit risk disclosures include charges relating to financial assets classified as 'assets held for sale'.

'Loans and other credit-related commitments' and 'financial guarantees', as reported in credit disclosures, also include exposures and allowances relating to financial assets classified as 'assets held for sale'.

Loans and advances to customers and banks measured at amortised cost

(Audited)

	2022		2021	
	Total gross loans and advances	Allowance for ECL	Total gross loans and advances	Allowance for ECL
	$m	$m	$m	$m
As reported	**1,041,258**	**(11,522)**	1,140,384	(11,434)
Reported in 'Assets held for sale'	**81,221**	**(392)**	2,424	(39)
At 31 December	**1,122,479**	**(11,914)**	1,142,808	(11,473)

At 31 December 2022, gross loans and advances of our banking business in Canada were $55.5bn, and the related allowance for ECL were $0.2bn. Gross loans of our retail banking operations in France were $25.1bn, and the related allowance for ECL were $0.1bn.

Lending balances held for sale continue to be measured at amortised cost less allowances for impairment and, therefore, such carrying amounts may differ from fair value.

These lending balances are part of associated disposal groups that are measured in their entirety at the lower of carrying amount and fair value less costs to sell. Any difference between the carrying amount of these assets and their sales price is part of the overall gain or loss on the associated disposal group as a whole.

For further details of the carrying amount and the fair value at 31 December 2022 of loans and advances to banks and customers classified as held for sale, see Note 23 on the financial statements.

Gross loans and allowance for ECL on loans and advances to customers and banks reported in 'Assets held for sale'

(Audited)

	Banking business in Canada		Retail banking operations in France		Other[1]		Total	
	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	55,431	(234)	25,121	(92)	412	(62)	80,964	(388)
– personal	26,637	(75)	22,691	(88)	305	(47)	49,633	(210)
– corporate and commercial	27,128	(154)	2,379	(4)	107	(15)	29,614	(173)
– non-bank financial institutions	1,666	(5)	51	—	—	—	1,717	(5)
Loans and advances to banks at amortised cost	100	—	—	—	157	(4)	257	(4)
At 31 December 2022	55,531	(234)	25,121	(92)	569	(66)	81,221	(392)

	Banking business in Canada		Retail banking operations in France		Other[2]		Total	
	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL	Gross carrying value	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	—	—	—	—	2,424	(39)	2,424	(39)
– personal	—	—	—	—	2,424	(39)	2,424	(39)
– corporate and commercial	—	—	—	—	—	—	—	—
– non-bank financial institutions	—	—	—	—	—	—	—	—
Loans and advances to banks at amortised cost	—	—	—	—	—	—	—	—
At 31 December 2021	—	—	—	—	2,424	(39)	2,424	(39)

1 *Comprising assets held for sale relating to the planned sale of our branch operations in Greece and of our business in Russia.*
2 *Comprising assets held for sale relating to our mass market retail banking business in the US.*

The table below analyses the amount of ECL (charges)/releases arising from assets held for sale. The charges during the period primarily relate to our retail banking operations in France.

Changes in expected credit losses and other credit impairment

(Audited)

	2022	2021
	$m	$m
ECL (charges)/releases arising from:		
– assets held for sale	(5)	—
– assets not held for sale	(3,587)	928
Year ended 31 December	(3,592)	928

Credit exposure

Maximum exposure to credit risk

(Audited)

This section provides information on balance sheet items and their offsets as well as loan and other credit-related commitments.

Commentary on consolidated balance sheet movements in 2022 is provided on page 106.

The offset on derivatives remains in line with the movements in maximum exposure amounts.

'Maximum exposure to credit risk' table

The following table presents our maximum exposure before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). The table excludes financial instruments whose carrying amount best represents the net exposure to credit risk, and it excludes equity securities as they are not subject to credit risk. For the financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount and is net of the allowance for ECL. For financial guarantees and other guarantees granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.

The offset in the table relates to amounts where there is a legally enforceable right of offset in the event of counterparty default and where, as a result, there is a net exposure for credit risk purposes. However, as there is no intention to settle these balances on a net basis under normal circumstances, they do not qualify for net presentation for accounting purposes. No offset has been applied to off-balance sheet collateral. In the case of derivatives, the offset column also includes collateral received in cash and other financial assets.

Other credit risk mitigants

While not disclosed as an offset in the following 'Maximum exposure to credit risk' table, other arrangements are in place that reduce our maximum exposure to credit risk. These include a charge over collateral on borrowers' specific assets, such as residential properties, collateral held in the form of financial instruments that are not held on the balance sheet and short positions in securities. In addition, for financial assets held as part of linked insurance/investment contracts the credit risk is predominantly borne by the policyholder. See page 341 and Note 31 on the financial statements for further details of collateral in respect of certain loans and advances and derivatives.

Collateral available to mitigate credit risk is disclosed in the 'Collateral' section on page 180.

Maximum exposure to credit risk

(Audited)

	2022			2021		
	Maximum exposure	**Offset**	**Net**	Maximum exposure	Offset	Net
	$m	**$m**	**$m**	$m	$m	$m
Loans and advances to customers held at amortised cost	**924,854**	**(20,315)**	**904,539**	1,045,814	(22,838)	1,022,976
– personal	**412,140**	**(2,575)**	**409,565**	475,234	(4,461)	470,773
– corporate and commercial	**446,032**	**(16,262)**	**429,770**	505,335	(16,824)	488,511
– non-bank financial institutions	**66,682**	**(1,478)**	**65,204**	65,245	(1,553)	63,692
Loans and advances to banks at amortised cost	**104,882**	**—**	**104,882**	83,136	—	83,136
Other financial assets held at amortised cost	**1,029,618**	**(8,969)**	**1,020,649**	882,708	(12,231)	870,477
– cash and balances at central banks	**327,002**	**—**	**327,002**	403,018	—	403,018
– items in the course of collection from other banks	**7,297**	**—**	**7,297**	4,136	—	4,136
– Hong Kong Government certificates of indebtedness	**43,787**	**—**	**43,787**	42,578	—	42,578
– reverse repurchase agreements – non-trading	**253,754**	**(8,969)**	**244,785**	241,648	(12,231)	229,417
– financial investments	**168,747**	**—**	**168,747**	97,302	—	97,302
– assets held for sale	**115,919**	**—**	**115,919**	3,411	—	3,411
– prepayments, accrued income and other assets	**113,112**	**—**	**113,112**	90,615	—	90,615
Derivatives	**284,146**	**(273,497)**	**10,649**	196,882	(188,284)	8,598
Total on-balance sheet exposure to credit risk	**2,343,500**	**(302,781)**	**2,040,719**	2,208,540	(223,353)	1,985,187
Total off-balance sheet	**934,326**	**—**	**934,326**	928,183	—	928,183
– financial and other guarantees	**106,861**	**—**	**106,861**	113,088	—	113,088
– loan and other credit-related commitments	**827,465**	**—**	**827,465**	815,095	—	815,095
At 31 Dec	**3,277,826**	**(302,781)**	**2,975,045**	3,136,723	(223,353)	2,913,370

Concentration of exposure

We have a number of global businesses with a broad range of products. We operate in a number of geographical markets with the majority of our exposures in Asia and Europe.

For an analysis of:

- financial investments, see Note 16 on the financial statements;
- trading assets, see Note 11 on the financial statements;
- derivatives, see page 187 and Note 15 on the financial statements; and
- loans and advances by industry sector and by the location of the principal operations of the lending subsidiary (or, in the case of the operations of The Hongkong and Shanghai Banking Corporation Limited, HSBC Bank plc, HSBC Bank Middle East Limited and HSBC Bank USA, by the location of the lending branch), see page 170 for wholesale lending and page 187 for personal lending.

Credit deterioration of financial instruments

(Audited)

A summary of our current policies and practices regarding the identification, treatment and measurement of stage 1, stage 2, stage 3 (credit impaired) and POCI financial instruments can be found in Note 1.2 on the financial statements.

Measurement uncertainty and sensitivity analysis of ECL estimates

(Audited)

The recognition and measurement of ECL involves the use of significant judgement and estimation. We form multiple economic scenarios based on economic forecasts, apply these assumptions to credit risk models to estimate future credit losses, and probability weight the results to determine an unbiased ECL estimate. Management judgemental adjustments are used to address late-breaking events, data and model limitations, model deficiencies and expert credit judgements.

Amid a deterioration in the economic and geopolitical environment, management judgements and estimates continued to be subject to a high degree of uncertainty in relation to assessing economic scenarios for impairment allowances in 2022.

Inflation, economic contraction and high interest rates, combined with an unstable geopolitical environment and the effects of global supply chain disruption, contributed to elevated levels of uncertainty during the year.

At 31 December 2022, as a result of this uncertainty, additional stage 1 and 2 impairment allowances were recognised. Management continued to reflect a degree of caution both in the selection of economic scenarios and their weightings, and in the use of management judgemental adjustments, described in more detail below.

At 31 December 2022, there was a reduction in management judgemental adjustments compared with 31 December 2021. Adjustments related to Covid-19 and for sector-specific risks were reduced as scenarios and modelled outcomes better reflected the key risks at 31 December 2022.

Methodology

Four global economic scenarios are used to capture the current economic environment and to articulate management's view of the range of potential outcomes. Scenarios produced to calculate ECL are aligned to HSBC's top and emerging risks.

Three of the scenarios are drawn from consensus forecasts and distributional estimates. The Central scenario is deemed the 'most likely' scenario, and usually attracts the largest probability weighting, while the outer scenarios represent the tails of the distribution, which are less likely to occur. The Central scenario is created using the average of a panel of external forecasters. Consensus Upside and Downside scenarios are created with reference to distributions for select markets that capture forecasters' views of the entire range of outcomes. In the later years of the scenarios, projections revert to long-term consensus trend expectations. In the consensus outer scenarios, reversion to trend expectations is done mechanically with reference to historically observed quarterly changes in the values of macroeconomic variables.

The fourth scenario, Downside 2, is designed to represent management's view of severe downside risks. It is a globally consistent narrative-driven scenario that explores more extreme economic outcomes than those captured by the consensus scenarios. In this scenario, variables do not, by design, revert to long-term trend expectations. They may instead explore alternative states of equilibrium, where economic activity moves permanently away from past trends. The consensus Downside and the consensus Upside scenarios are each constructed to be consistent with a 10% probability. The Downside 2 is constructed with a 5% probability. The Central scenario is assigned the remaining 75%. This weighting scheme is deemed appropriate for the unbiased estimation of ECL in most circumstances. However, management may depart from this probability-based scenario weighting approach when the economic outlook is determined to be particularly uncertain and risks are elevated.

In light of ongoing risks, management deviated from this probability weighting in the fourth quarter of 2022, and assigned additional weight to outer scenarios.

Description of economic scenarios

The economic assumptions presented in this section have been formed by HSBC with reference to external forecasts and estimates, specifically for the purpose of calculating ECL.

Economic forecasts in the Central scenario remain subject to a high degree of uncertainty. Upside and Downside scenarios are constructed so that they encompass the potential crystallisation of a number of key macro-financial risks.

At the end of 2022, risks to the economic outlook included the persistence of high inflation and its consequences on monetary policy. Rapid changes to public policy also increased forecast uncertainty.

In Asia, the removal of Chinese Covid-19-related public health restrictions presents a key source of potential upside risk, but with significant near-term uncertainty relating to a subsequent surge of infections. This policy change could also have global implications.

In Europe, risks relating to energy pricing and supply security remain significant. Geopolitical risks also remain significant and include the possibility of a prolonged and escalating Russia-Ukraine war, continued differences between the US and other countries with China over a range of economic and strategic issues, and the evolution of the UK's relationship with the EU.

Economic forecasts for our main markets deteriorated in the fourth quarter as GDP growth slowed. In North America and Europe, high inflation and rising interest rates have reduced real household incomes and raised business costs, dampening consumption and investment and lowering growth expectations. The effects of higher interest rate expectations and lower growth are evident in asset price expectations, with house prices forecasts, in particular, significantly lower.

In Asia, forecasts for Hong Kong and mainland China were cut following weaker than expected third-quarter GDP growth, and due to China's adherence to a stringent pandemic-related public health policy response for the majority of the year. While China made an abrupt reversal of the policy in December and GDP is expected to recover in 2023, there remains a very high degree of uncertainty to both the upside and downside, and consensus forecasts have been slow to adjust. The increased uncertainty over China's lifting of the restrictions has been reflected in management's assessment of scenario probabilities.

The scenarios used to calculate ECL in the *Annual Report and Accounts 2022* are described below.

The consensus Central scenario

HSBC's Central scenario reflects a low-growth and higher-inflation environment across many of our key markets. The scenario features an initial period of below-trend GDP growth in most of our main markets as higher inflation and tighter monetary policy causes a squeeze on business margins and households' real disposable income. Growth returns to its long-term expected trend in later years as central banks bring inflation back to target.

However, three of our markets are forecast to experience increased GDP growth. In Hong Kong and mainland China, GDP growth is expected to be stronger in 2023 relative to 2022, following several quarters of negative GDP growth and the suspension of Covid-19-related restrictions. In the UAE, high oil prices and the continued recovery of international travel and tourism are expected to ensure growth remains above trend in the short term.

Our Central scenario assumes that inflation peaked in most of our key markets at the end of 2022, but remains high through 2023, before moderating as energy prices stabilise and supply chain disruptions abate. Central banks are expected to keep raising interest rates until the middle of 2023. Inflation is forecast to revert to target in most markets by early 2024.

Global GDP is expected to grow by 1.6% in 2023 in the Central scenario, and the average rate of global GDP growth is forecast to be 2.5% over the five-year forecast period. This is below the average growth rate over the five-year period prior to the onset of the pandemic.

The key features of our Central scenario are:

- Economic activity in European and North American markets continues to weaken. Most major economies are forecast to grow in 2023, but at very low rates. Hong Kong and mainland China are expected to see a recovery in activity from 2023 as Covid-19-related restrictions are lifted.
- In most markets, unemployment rises moderately from historical lows as economic activity slows. Labour markets remain fairly tight across our key markets.
- Inflation is expected to remain elevated across many of our key markets, driven by energy and food prices. Inflation is subsequently expected to converge back towards central banks' target rates over the next two years of the forecast.
- Policy interest rates in key markets will continue to rise in the near term but at a slower pace. Interest rates will stay elevated but start to ease as inflation in each of the markets return to target.
- The West Texas Intermediate oil price is forecast to average $72 per barrel over the projection period.

The Central scenario was first created with forecasts available in November, and reviewed continually until late December. Probability weights assigned to the Central scenario vary from 55% to 70% and reflect relative differences in risk and uncertainty across markets.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Central scenario.

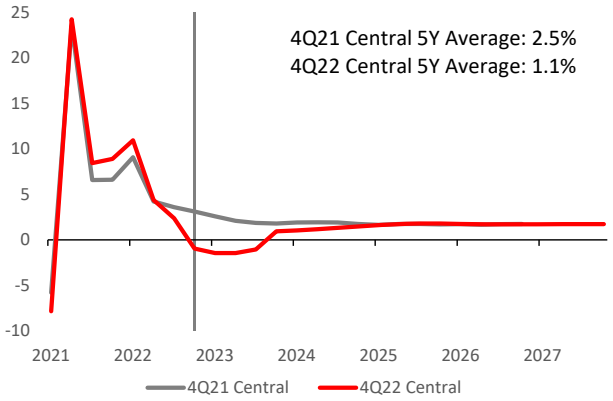
Central scenario 2023–2027

	UK %	US %	Hong Kong %	Mainland China %	Canada %	France %	UAE %	Mexico %
GDP growth rate								
2023: Annual average growth rate	**(0.8)**	**0.2**	**2.7**	**4.6**	**0.6**	**0.2**	**3.7**	**1.2**
2024: Annual average growth rate	**1.3**	**1.5**	**3.0**	**4.8**	**1.9**	**1.6**	**3.7**	**2.0**
2025: Annual average growth rate	**1.7**	**2.0**	**2.7**	**4.7**	**2.0**	**1.5**	**3.1**	**2.3**
5-year average	**1.1**	**1.5**	**2.7**	**4.6**	**1.6**	**1.2**	**3.2**	**1.9**
Unemployment rate								
2023: Annual average rate	**4.4**	**4.3**	**3.7**	**5.2**	**6.1**	**7.6**	**2.9**	**3.7**
2024: Annual average rate	**4.6**	**4.5**	**3.5**	**5.1**	**5.9**	**7.5**	**2.8**	**3.7**
2025: Annual average rate	**4.3**	**4.2**	**3.4**	**5.0**	**6.0**	**7.3**	**2.8**	**3.5**
5-year average	**4.3**	**4.2**	**3.4**	**5.0**	**5.9**	**7.3**	**2.8**	**3.6**
House price growth								
2023: Annual average growth rate	**0.2**	**(2.5)**	**(10.0)**	**(0.1)**	**(15.6)**	**1.8**	**5.9**	**7.9**
2024: Annual average growth rate	**(3.8)**	**(3.2)**	**(3.0)**	**2.9**	**(1.2)**	**2.0**	**5.2**	**5.2**
2025: Annual average growth rate	**0.7**	**(1.0)**	**1.7**	**3.5**	**4.0**	**3.1**	**4.5**	**4.2**
5-year average	**0.4**	**(0.7)**	**(1.0)**	**2.9**	**(1.1)**	**2.8**	**4.4**	**5.1**
Inflation rate								
2023: Annual average rate	**6.9**	**4.1**	**2.1**	**2.4**	**3.5**	**4.6**	**3.2**	**5.7**
2024: Annual average rate	**2.5**	**2.5**	**2.1**	**2.2**	**2.2**	**2.0**	**2.2**	**4.1**
2025: Annual average rate	**2.1**	**2.2**	**2.0**	**2.2**	**2.1**	**1.8**	**2.1**	**3.7**
5-year average	**3.1**	**2.7**	**2.1**	**2.2**	**2.4**	**2.4**	**2.3**	**4.2**
Probability	**60**	**70**	**55**	**55**	**70**	**60**	**70**	**70**

The graphs compare the respective Central scenario at the year end 2021 with economic expectations at the end of 2022.

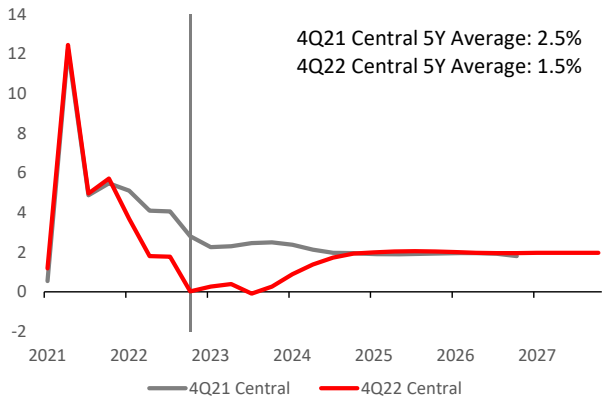
GDP growth: Comparison of Central scenarios

UK



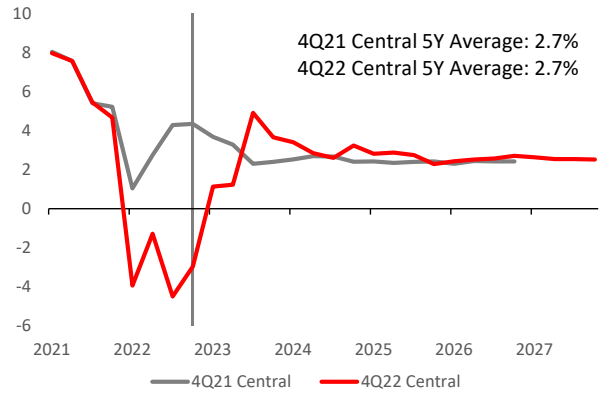
Note: Real GDP shown as year-on-year percentage change.

US



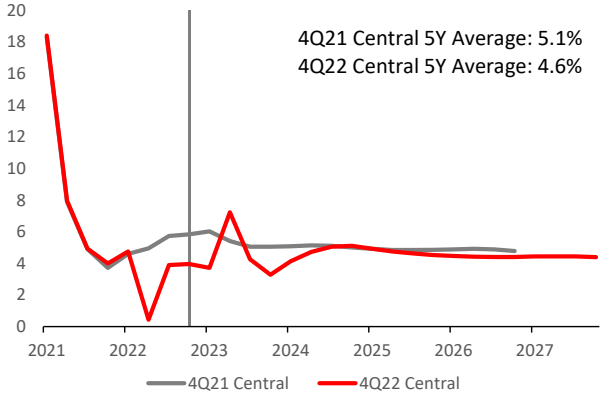
Note: Real GDP shown as year-on-year percentage change.

Hong Kong



Note: Real GDP shown as year-on-year percentage change.

Mainland China



Note: Real GDP shown as year-on-year percentage change.

The consensus Upside scenario

Compared with the Central scenario, the consensus Upside scenario features stronger economic activity in the near term, before converging to long-run trend expectations. It also incorporates a faster fall in the rate of inflation than incorporated in the Central scenario.

The scenario is consistent with a number of key upside risk themes. These include faster resolution of supply chain issues; a rapid conclusion to the Russia-Ukraine war; de-escalation of tensions between the US and China; relaxation of Covid-19 policies in Asia; and improved relations between the UK and the EU.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Upside scenario.

Consensus Upside scenario 'best outcome'

	UK	US	Hong Kong	Mainland China	Canada	France	UAE	Mexico
	%	%	%	%	%	%	%	%
GDP growth rate	4.4 (4Q24)	3.6 (4Q24)	9.0 (3Q23)	10.3 (2Q23)	4.3 (3Q24)	3.1 (1Q24)	7.8 (4Q23)	4.7 (4Q23)
Unemployment rate	3.5 (4Q23)	3.1 (3Q23)	3.0 (4Q23)	4.7 (3Q24)	5.2 (3Q24)	6.5 (4Q24)	2.2 (3Q24)	3.1 (3Q23)
House price growth	4.2 (1Q23)	3.6 (1Q23)	1.4 (4Q24)	6.9 (4Q24)	4.9 (2Q24)	3.7 (1Q23)	9.5 (2Q24)	10.3 (4Q23)
Inflation rate	0.7 (1Q24)	1.6 (1Q24)	(0.1) (4Q23)	0.8 (4Q23)	1.0 (1Q24)	0.8 (4Q23)	1.5 (3Q24)	3.2 (1Q24)
Probability	5	5	20	20	5	5	5	5

Note: Extreme point in the consensus Upside is 'best outcome' in the scenario, for example the highest GDP growth and the lowest unemployment rate, in the first two years of the scenario. The date on which the extreme is reached is indicated in parenthesis. For inflation, lower inflation is interpreted as the 'best' outcome.

Downside scenarios

Downside scenarios explore the intensification and crystallisation of a number of key economic and financial risks.

High inflation and a stronger monetary policy response have become key concerns for global growth. In the Downside scenarios, supply chain disruptions intensify, exacerbated by an escalation in the spread of Covid-19, and rising geopolitical tensions drive inflation higher.

There also remains a risk that energy and food prices rise further due to the Russia-Ukraine war, increasing pressure on household budgets and firms' costs.

The possibility of inflation expectations becoming detached from central bank targets also remains a risk. A wage-price spiral triggered by higher inflation and pandemic-related labour supply shortages could put sustained upward pressure on wages, aggravating cost pressures and increasing the squeeze on household real incomes and corporate margins. In turn, it raises the risk of a more forceful policy response from central banks, a steeper trajectory for interest rates and, ultimately, a deep economic recession.

The risks relating to Covid-19 are centred on the emergence of a new variant with greater vaccine resistance that necessitates the imposition of stringent public health policies. In Asia, with the reopening of China in December, management of Covid-19 remains a key source of uncertainty, with the rapid spread of the virus posing a heightened risk of new vaccine-resistant variants emerging.

The geopolitical environment also present risks, including:

- a prolonged Russia-Ukraine war with escalation beyond Ukraine's borders;
- the deterioration of the trading relationship between the UK and the EU over the Northern Ireland Protocol; and
- continued differences between the US and other countries with China, which could affect sentiment and restrict global economic activity.

The consensus Downside scenario

In the consensus Downside scenario, economic activity is considerably weaker compared with the Central scenario. In this scenario, GDP growth weakens below the Central scenario, unemployment rates rise and asset prices fall. The scenario features a temporary supply side shock that keeps inflation higher than the baseline, before the effects of weaker demand begin to dominate, leading to a fall in commodity prices and to lower inflation.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Downside scenario.

Consensus Downside scenario 'worst outcome'

	UK	US	Hong Kong	Mainland China	Canada	France	UAE	Mexico
	%	%	%	%	%	%	%	%
GDP growth rate	(3.5) (3Q23)	(3.7) (4Q23)	(2.2) (4Q23)	(1.2) (4Q23)	(3.9) (4Q23)	(1.4) (3Q23)	1.0 (4Q23)	(2.7) (4Q23)
Unemployment rate	5.8 (2Q24)	5.9 (1Q24)	5.2 (3Q24)	5.9 (4Q23)	7.6 (3Q23)	8.8 (4Q23)	4.1 (3Q23)	4.4 (1Q23)
House price growth	(10.1) (2Q24)	(7.8) (4Q23)	(14.9) (2Q23)	(1.9) (1Q23)	(23.8) (2Q23)	(0.6) (4Q23)	(3.0) (4Q23)	2.2 (3Q24)
Inflation rate (min)	(0.4) (4Q24)	0.6 (4Q24)	0.3 (4Q24)	0.7 (4Q24)	0.4 (4Q24)	0.3 (4Q24)	1.8 (2Q23)	2.2 (4Q24)
Inflation rate (max)	10.8 (1Q23)	6.2 (1Q23)	3.7 (4Q23)	4.0 (4Q23)	6.0 (1Q23)	7.2 (1Q23)	4.5 (1Q23)	7.9 (1Q23)
Probability	25	20	20	20	15	25	20	20

Note: Extreme point in the consensus Downside is 'worst outcome' in the scenario, for example lowest GDP growth and the highest unemployment rate, in the first two years of the scenario. The date on which the extreme is reached is indicated in parenthesis. Due to the nature of the shock to inflation in the Downside scenarios, both the lowest and the highest point is shown in the tables.

Downside 2 scenario

The Downside 2 scenario features a deep global recession and reflects management's view of the tail of the economic distribution. It incorporates the crystallisation of a number of risks simultaneously, including further escalation of the Russia-Ukraine war, worsening of supply chain disruptions and the emergence of a vaccine-resistant Covid-19 variant that necessitates a stringent public health policy response globally.

This scenario features an initial supply-side shock that pushes up inflation and interest rates higher. This impulse is expected to prove short lived as a large downside demand pressure causes commodity prices to correct sharply and global price inflation to fall as a severe and prolonged recession takes hold.

The following table describes key macroeconomic variables and the probabilities assigned in the Downside 2 scenario.

Downside 2 scenario 'worst outcome'

	UK	US	Hong Kong	Mainland China	Canada	France	UAE	Mexico
	%	%	%	%	%	%	%	%
GDP growth rate	(6.9) (3Q23)	(5.0) (4Q23)	(9.2) (4Q23)	(6.9) (4Q23)	(5.9) (4Q23)	(6.8) (4Q23)	(3.7) (2Q24)	(7.4) (4Q23)
Unemployment rate	8.7 (2Q24)	9.5 (4Q24)	5.8 (1Q24)	6.8 (4Q24)	11.6 (2Q24)	10.3 (4Q24)	4.6 (2Q24)	5.6 (2Q24)
House price growth	(22.9) (2Q24)	(21.5) (4Q23)	(18.2) (1Q24)	(18.5) (4Q23)	(36.3) (4Q23)	(6.4) (2Q24)	(3.6) (4Q23)	0.9 (3Q24)
Inflation rate (min)	(2.3) (2Q24)	0.3 (4Q24)	0.6 (4Q24)	1.0 (4Q24)	1.1 (4Q24)	(2.5) (2Q24)	1.7 (4Q24)	2.0 (4Q24)
Inflation rate (max)	13.5 (2Q23)	6.3 (1Q23)	4.3 (4Q23)	4.6 (4Q23)	6.5 (1Q23)	10.4 (2Q23)	4.8 (1Q23)	7.9 (1Q23)
Probability	10	5	5	5	10	10	5	5

Note: Extreme point in the Downside 2 is 'worst outcome' in the scenario, for example lowest GDP growth and the highest unemployment rate, in the first two years of the scenario. The date on which the extreme is reached is indicated in parenthesis. Due to the nature of the shock to inflation in the Downside scenarios, both the lowest and the highest point is shown in the tables.

Scenario weighting

In reviewing the economic conjuncture, the level of risk and uncertainty, management has considered both global and country-specific factors. This has led management to assign scenario probabilities that are tailored to its view of uncertainty in individual markets.

Key consideration around uncertainty attached to the Central scenario projections focused on:

- the progression of the Covid-19 pandemic in Asian countries, and the announcement of the removal of Covid-19-related measures and travel restrictions in mainland China and Hong Kong;
- further tightening of monetary policy, and the impact on borrowing costs in interest-rate sensitive sectors, such as housing;
- the risks to gas supply security in Europe, and the subsequent impact on inflation and commodity prices and growth; and
- the ongoing risks to global supply chains.

In mainland China and Hong Kong, the announcement of the relaxation of Covid-19-related measures and travel restrictions has led to increased uncertainty around the Central scenario projection. It was management's view that the easing of the policy could increase risks to the upside in the form of increased spending and travel. However, the continuing risks to the downside were also acknowledged, given the surge in Covid-19 infections and the potential for a new vaccine-resistant variant. This led management to assign a combined weighting of 75% to the consensus Upside and Central scenarios in both markets.

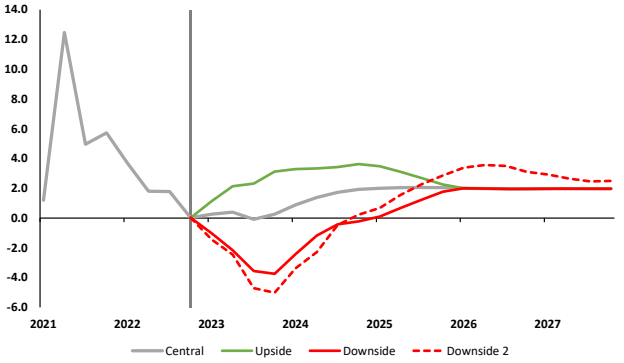
In the UK and US, the surge in price inflation and a squeeze on household real incomes have led to strong monetary policy responses from both central banks. Higher interest rates have increased recession risks and the prospects for outright decline in house prices. The UK faces additional challenges from the rise in energy prices and accompanying deterioration in the terms of trade. For Canada and Mexico, similar risk themes dominate, and the connectivity to the US has also been a key consideration. For the UK, the consensus Upside and Central scenarios had a combined weighting of 65%. In each of the other three markets, the combined weightings of the consensus Upside and Central scenarios were 75%.

In France, uncertainties around the outlook remain elevated due to high inflation and Europe's exposure to the Russia-Ukraine war through the economic costs incurred from the imposition of sanctions, trade disruption and energy dependence on Russia. The consensus Upside and Central scenarios had a combined weighting of 65%.

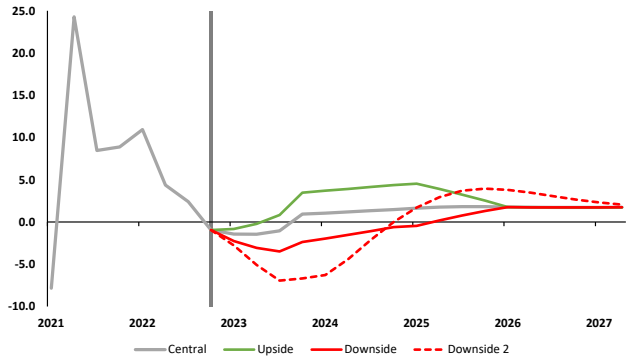
Management concluded that the outlook for the UAE was the least uncertain of all our key markets. It is benefiting from higher commodity prices and the revival in tourism and travel. The consensus Upside and Central scenarios had a combined weighting of 75%.

The following graphs show the historical and forecasted GDP growth rate for the various economic scenarios in our four largest markets.

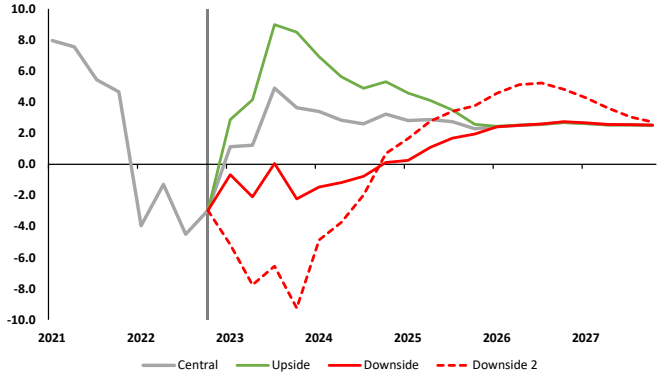
US



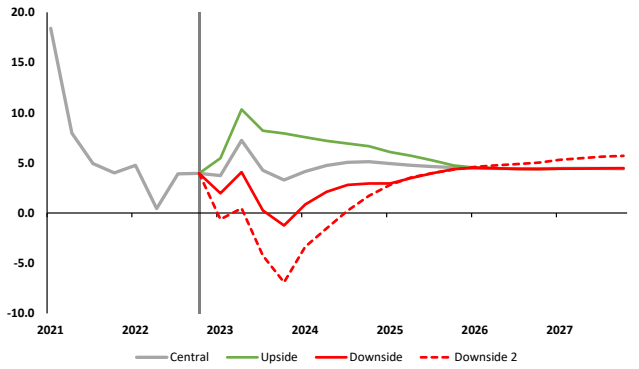
UK



Hong Kong



Mainland China



Critical estimates and judgements

The calculation of ECL under IFRS 9 involves significant judgements, assumptions and estimates. The level of estimation uncertainty and judgement has remained elevated since 31 December 2021, including judgements relating to:

- the selection and weighting of economic scenarios, given rapidly changing economic conditions and a wide dispersion of economic forecasts. There is judgement in making assumptions about the effects of inflation and interest rates, global growth, supply chain disruption; and
- estimating the economic effects of those scenarios on ECL, particularly as the historical relationship between macroeconomic variables and defaults might not reflect the dynamics of current macroeconomic conditions.

How economic scenarios are reflected in ECL calculations

Models are used to reflect economic scenarios on ECL estimates. As described above, modelled assumptions and linkages based on historical information could not alone produce relevant information under the conditions experienced in 2022, and management judgemental adjustments were still required to support modelled outcomes.

We have developed globally consistent methodologies for the application of forward economic guidance into the calculation of ECL for wholesale and retail credit risk. These standard approaches are described below, followed by the management judgemental adjustments made, including those to reflect the circumstances experienced in 2022.

For our wholesale portfolios, a global methodology is used for the estimation of the term structure of probability of default ('PD') and loss given default ('LGD'). For PDs, we consider the correlation of forward economic guidance to default rates for a particular industry in a country. For LGD calculations, we consider the correlation of forward economic guidance to collateral values and realisation rates for a particular country and industry. PDs and LGDs are estimated for the entire term structure of each instrument.

For impaired loans, LGD estimates take into account independent recovery valuations provided by external consultants where available or internal forecasts corresponding to anticipated economic conditions and individual company conditions. In estimating the ECL on impaired loans that are individually considered not to be significant, we incorporate the forward economic guidance proportionate to the probability-weighted outcome and the Central scenario outcome of the performing population.

For our retail portfolios, the impact of economic scenarios on PD is modelled at a portfolio level. Historical relationships between observed default rates and macroeconomic variables are integrated into IFRS 9 ECL estimates by using economic response models.

The impact of these scenarios on PD is modelled over a period equal to the remaining maturity of the underlying asset or assets. The impact on LGD is modelled for mortgage portfolios by forecasting future loan-to-value profiles for the remaining maturity of the asset by using national level forecasts of the house price index and applying the corresponding LGD expectation.

These models are based largely on historical observations and correlations with default rates. Management judgemental adjustments are described below.

Management judgemental adjustments

In the context of IFRS 9, management judgemental adjustments are typically short-term increases or decreases to the ECL at either a customer, segment or portfolio level to account for late-breaking events, model and data limitations and deficiencies, and expert credit judgement applied following management review and challenge.

This includes refining model inputs and outputs and using adjustments to ECL based on management judgement and higher-level quantitative analysis for impacts that are difficult to model.

The effects of management judgemental adjustments are considered for both balances and ECL when determining whether or not a significant increase in credit risk has occurred and is allocated to a stage where appropriate. This is in accordance with the internal adjustments framework.

Management judgemental adjustments are reviewed under the governance process for IFRS 9 (as detailed in the section 'Credit risk management' on page 145). Review and challenge focuses on the rationale and quantum of the adjustments with a further review carried out by the second line of defence where significant. For some management judgemental adjustments, internal frameworks establish the conditions under which these adjustments should no longer be required and as such are considered as part of the governance process. This internal governance process allows management judgemental adjustments to be reviewed regularly and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate.

The drivers of management judgemental adjustments continue to evolve with the economic environment and as new risks emerge.

At 31 December 2022, there was a $0.9bn reduction in management judgemental adjustments compared with 31 December 2021. Adjustments related to Covid-19 and for sector-specific risks were reduced as scenarios and modelled outcomes better reflected the key risks at 31 December 2022.

Management judgemental adjustments made in estimating the scenario-weighted reported ECL at 31 December 2022 are set out in the following table.

Management judgemental adjustments to ECL at 31 December 2022[1]

	Retail $bn	Wholesale $bn	Total $bn
Banks, sovereigns, government entities and low-risk counterparties	—	—	—
Corporate lending adjustments		0.5	0.5
Retail lending inflation-related adjustments	0.1		0.1
Other macroeconomic-related adjustments	0.1		0.1
Pandemic-related economic recovery adjustments	—		—
Other retail lending adjustments	0.2		0.2
Total	**0.3**	**0.5**	**0.8**

Management judgemental adjustments to ECL at 31 December 2021[1]

	Retail $bn	Wholesale $bn	Total $bn
Banks, sovereigns, government entities and low-risk counterparties		(0.1)	(0.1)
Corporate lending adjustments		1.3	1.3
Retail lending inflation-related adjustments			—
Other macroeconomic-related adjustments			—
Pandemic-related economic recovery adjustments	0.2		0.2
Other retail lending adjustments	0.3		0.3
Total	0.5	1.2	1.7

1 *Management judgemental adjustments presented in the table reflect increases or (decreases) to ECL, respectively.*

Management judgemental adjustments at 31 December 2022 were an increase to ECL of $0.5bn for the wholesale portfolio and an increase to ECL of $0.3bn for the retail portfolio.

At 31 December 2022, wholesale management judgemental adjustments were an ECL increase of $0.5bn (31 December 2021: $1.2bn increase).

- Adjustments to corporate exposures increased ECL by $0.5bn at 31 December 2022 (31 December 2021: $1.3bn increase). These principally reflected the outcome of management judgements for high-risk and vulnerable sectors in some of our key markets. This was supported by credit experts' input, portfolio risk metrics, short- to medium-term risks under each scenario, model performance, quantitative analyses and benchmarks. Considerations include risk of individual exposures under different macroeconomic scenarios and sub-sector analyses.
  The largest increase in ECL was observed in the real estate sector, including material adjustments to reflect the uncertainty of the higher-risk Chinese commercial real estate exposures, booked in Hong Kong.

At 31 December 2022, retail management judgemental adjustments were an ECL increase of $0.3bn (31 December 2021: $0.5bn increase).

- Retail lending inflation-related adjustments increased ECL by $0.1bn (31 December 2021: $0.0bn). These adjustments addressed where increasing inflation and interest rates result in affordability risks that were not fully captured by the modelled output.
- Other macroeconomic-related adjustments increased ECL by $0.1bn (31 December 2021: $0.0bn). These adjustments were primarily in relation to country-specific risks related to future macroeconomic conditions.
- Other retail lending adjustments increased ECL by $0.2bn (31 December 2021: $0.3bn increase), reflecting all other data, model and management judgemental adjustments.
- Pandemic-related economic recovery adjustments were removed during 2022 as scenarios stabilised.

Economic scenarios sensitivity analysis of ECL estimates

Management considered the sensitivity of the ECL outcome against the economic forecasts as part of the ECL governance process by recalculating the ECL under each scenario described above for selected portfolios, applying a 100% weighting to each scenario in turn. The weighting is reflected in both the determination of a significant increase in credit risk and the measurement of the resulting ECL.

The ECL calculated for the Upside and Downside scenarios should not be taken to represent the upper and lower limits of possible ECL outcomes. The impact of defaults that might occur in the future under different economic scenarios is captured by recalculating ECL for loans at the balance sheet date.

There is a particularly high degree of estimation uncertainty in numbers representing more severe risk scenarios when assigned a 100% weighting.

For wholesale credit risk exposures, the sensitivity analysis excludes ECL and financial instruments related to defaulted (stage 3) obligors. It is generally impracticable to separate the effect of macroeconomic factors in individual assessments of obligors in default. The measurement of stage 3 ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios, and loans to defaulted obligors are a small portion of the overall wholesale lending exposure, even if representing the majority of the allowance for ECL. Therefore, the sensitivity analysis to macroeconomic scenarios does not capture the residual estimation risk arising from wholesale stage 3 exposures. Due to the range and specificity of the credit factors to which the ECL is sensitive, it is not possible to provide a meaningful alternative sensitivity analysis for a consistent set of risks across all defaulted obligors.

For retail credit risk exposures, the sensitivity analysis includes ECL for loans and advances to customers related to defaulted obligors. This is because the retail ECL for secured mortgage portfolios including loans in all stages is sensitive to macroeconomic variables.

Wholesale and retail sensitivity

The wholesale and retail sensitivity tables present the 100% weighted results. These exclude portfolios held by the insurance business and small portfolios, and as such cannot be directly compared with personal and wholesale lending presented in other credit risk tables. In both the wholesale and retail analysis, the comparative period results for Downside 2 scenarios are also not directly comparable with the current period, because they reflect different risks relative to the consensus scenarios for the period end.

The wholesale and retail sensitivity analysis is stated inclusive of management judgemental adjustments, as appropriate to each scenario.

Wholesale analysis

IFRS 9 ECL sensitivity to future economic conditions[1,2,3]

By geography at 31 Dec 2022	Gross carrying amount[2]	Reported ECL	Consensus Central scenario ECL	Consensus Upside scenario ECL	Consensus Downside scenario ECL	Downside 2 scenario ECL
	$m	$m	$m	$m	$m	$m
UK	**421,685**	**769**	**624**	**484**	**833**	**2,240**
US	**190,858**	**277**	**241**	**227**	**337**	**801**
Hong Kong	**415,875**	**925**	**819**	**592**	**1,315**	**2,161**
Mainland China	**125,466**	**295**	**242**	**144**	**415**	**1,227**
Canada[4]	**83,274**	**126**	**80**	**60**	**148**	**579**
Mexico	**26,096**	**88**	**80**	**67**	**116**	**313**
UAE	**45,064**	**45**	**41**	**30**	**55**	**93**
France	**173,146**	**110**	**102**	**90**	**121**	**145**
By geography at 31 Dec 2021						
UK	483,273	920	727	590	944	1,985
US	227,817	227	204	155	317	391
Hong Kong	434,608	767	652	476	984	1,869
Mainland China	120,627	149	113	36	216	806
Canada[4]	85,117	151	98	61	150	1,121
Mexico	23,054	118	80	61	123	358
UAE	44,767	158	122	73	214	711
France	163,845	133	121	106	162	187

1 *ECL sensitivity includes off-balance sheet financial instruments. These are subject to significant measurement uncertainty.*
2 *Includes low credit-risk financial instruments such as debt instruments at FVOCI, which have high carrying amounts but low ECL under all the above scenarios.*
3 *Excludes defaulted obligors. For a detailed breakdown of performing and non-performing wholesale portfolio exposures, see page 170.*
4 *Classified as held for sale at 31 December 2022.*

At 31 December 2021, the most significant level of ECL sensitivity was observed in the UK, Hong Kong and mainland China.

Real estate was the sector with higher sensitivity to a severe Downside scenario, namely in Hong Kong and mainland China due to higher risk of some material exposures.

In the UK, the real estate and services sectors accounted for the majority of ECL sensitivity due to higher exposure to these sectors in this market.

Retail analysis

IFRS 9 ECL sensitivity to future economic conditions[1]

By geography at 31 December 2022	Gross carrying amount	Reported ECL	Consensus Central scenario ECL	Consensus Upside scenario ECL	Consensus Downside scenario ECL	Downside 2 scenario ECL
	$m	$m	$m	$m	$m	$m
UK						
Mortgages	**147,306**	**204**	**188**	**183**	**189**	**399**
Credit cards	**6,518**	**455**	**434**	**396**	**442**	**719**
Other	**7,486**	**368**	**333**	**274**	**383**	**605**
Mexico						
Mortgages	**6,319**	**152**	**127**	**102**	**183**	**270**
Credit cards	**1,616**	**198**	**162**	**97**	**233**	**289**
Other	**3,447**	**438**	**400**	**318**	**503**	**618**
Hong Kong						
Mortgages	**100,107**	**1**	**1**	**—**	**1**	**1**
Credit cards	**8,003**	**261**	**227**	**180**	**417**	**648**
Other	**5,899**	**85**	**81**	**74**	**100**	**123**
UAE						
Mortgages	**2,170**	**37**	**37**	**36**	**38**	**38**
Credit cards	**441**	**41**	**37**	**21**	**68**	**86**
Other	**718**	**17**	**17**	**15**	**19**	**22**
France[3]						
Mortgages	**21,440**	**51**	**50**	**50**	**51**	**52**
Other	**1,433**	**54**	**53**	**52**	**55**	**59**
US						
Mortgages	**13,489**	**7**	**6**	**6**	**8**	**15**
Credit cards	**219**	**26**	**25**	**23**	**27**	**36**
Canada[2]						
Mortgages	**25,163**	**45**	**44**	**43**	**46**	**58**
Credit cards	**299**	**10**	**9**	**8**	**11**	**11**
Other	**1,399**	**16**	**14**	**13**	**17**	**36**

IFRS 9 ECL sensitivity to future economic conditions[1]

By geography at 31 December 2021	Gross carrying amount	Reported ECL	Consensus Central scenario ECL	Consensus Upside scenario ECL	Consensus Downside scenario ECL	Downside 2 scenario ECL
	$m	$m	$m	$m	$m	$m
UK						
Mortgages	155,084	191	182	175	197	231
Credit cards	8,084	439	381	330	456	987
Other	7,902	369	298	254	388	830
Mexico						
Mortgages	4,972	123	116	106	130	164
Credit cards	1,167	141	134	122	150	176
Other	2,935	366	360	350	374	401
Hong Kong						
Mortgages	96,697	—	—	—	—	—
Credit cards	7,644	218	206	154	231	359
Other	5,628	109	101	88	128	180
UAE						
Mortgages	1,982	45	44	42	46	57
Credit cards	429	43	41	29	54	82
Other	615	19	18	13	21	25
France						
Mortgages	23,159	63	62	62	63	64
Other	1,602	61	61	60	61	63
US						
Mortgages	15,379	28	27	26	29	41
Credit cards	446	80	76	70	83	118
Canada						
Mortgages	26,097	28	27	26	29	48
Credit cards	279	9	9	9	10	13
Other	1,598	19	18	17	19	27

1 ECL sensitivities exclude portfolios utilising less complex modelling approaches.
2 Classified as 'assets held for sale' at 31 December 2022.
3 Includes balances and ECL, which have been reclassified from 'loans and advances to customers' to 'assets held for sale' in the balance sheet. This also includes any balances and ECL which continue to be reported as personal lending in 'loans and advances to customers' that are in accordance with the basis of inclusion for retail sensitivity analysis.

At 31 December 2022, the most significant level of ECL sensitivity was observed in the UK, Mexico and Hong Kong. Mortgages reflected the lowest level of ECL sensitivity across most markets as collateral values remained resilient. Hong Kong mortgages had low levels of reported ECL due to the credit quality of the portfolio. Credit cards and other unsecured lending are more sensitive to economic forecasts, and therefore reflected the highest level of ECL sensitivity during 2022.

Group ECL sensitivity results

The ECL impact of the scenarios and management judgemental adjustments are highly sensitive to movements in economic forecasts. Based upon the sensitivity tables presented above, if the Group ECL balance was estimated solely on the basis of the Central scenario, Downside scenario or the Downside 2 scenario at 31 December 2022, it would increase/(decrease) as presented in the below table.

Total Group ECL at 31 December 2022	**Retail[1] $bn**	**Wholesale[1] $bn**
Reported ECL	**3.0**	**3.1**
Scenarios		
100% Consensus Central scenario	**(0.2)**	**(0.5)**
100% Consensus Upside scenario	**(0.6)**	**(1.1)**
100% Consensus Downside scenario	**0.4**	**0.8**
100% Downside 2 scenario	**1.8**	**5.5**

Total Group ECL at 31 December 2021	Retail[1] $bn	Wholesale $bn
Reported ECL	3.0	3.1
Scenarios		
100% Consensus Central scenario	(0.2)	(0.6)
100% Consensus Upside scenario	(0.5)	(1.2)
100% Consensus Downside scenario	0.2	0.6
100% Downside 2 scenario	2.0	5.5

1 *On the same basis as retail and wholesale sensitivity analysis.*

At Group level for both the retail and wholesale portfolios, the reported ECL in scope of this analysis remained stable since 31 December 2021. The Group total Downside 2 scenario ECL continues to present the highest level of sensitivity.

The ECL sensitivity for the Central scenario remained flat for the wholesale and retail portfolios from the previous year. For the remaining scenarios, the changes in ECL sensitivity from the previous year were reflective of geographical and sector risks, which increased or reduced accordingly with macroeconomic conditions.

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees

The following disclosure provides a reconciliation by stage of the Group's gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees. Movements are calculated on a quarterly basis and therefore fully capture stage movements between quarters. If movements were calculated on a year-to-date basis they would only reflect the opening and closing position of the financial instrument.

The transfers of financial instruments represents the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL.

The net remeasurement of ECL arising from stage transfers represents the increase or decrease due to these transfers, for example, moving from a 12-month (stage 1) to a lifetime (stage 2) ECL measurement basis. Net remeasurement excludes the underlying customer risk rating ('CRR')/probability of default ('PD') movements of the financial instruments transferring stage. This is captured, along with other credit quality movements in the 'changes in risk parameters – credit quality' line item.

Changes in 'New financial assets originated or purchased', 'assets derecognised (including final repayments)' and 'changes to risk parameters – further lending/repayment' represent the impact from volume movements within the Group's lending portfolio.

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired					
	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**1,577,582**	**(1,557)**	**155,742**	**(3,326)**	**19,797**	**(6,928)**	**274**	**(64)**	**1,753,395**	**(11,875)**
Transfers of financial instruments:	**(99,022)**	**(798)**	**89,052**	**1,620**	**9,970**	**(822)**	**—**	**—**	**—**	**—**
– transfers from stage 1 to stage 2	**(225,616)**	**470**	**225,616**	**(470)**	**—**	**—**	**—**	**—**	**—**	**—**
– transfers from stage 2 to stage 1	**128,246**	**(1,216)**	**(128,246)**	**1,216**	**—**	**—**	**—**	**—**	**—**	**—**
– transfers to stage 3	**(2,392)**	**9**	**(10,087)**	**1,132**	**12,479**	**(1,141)**	**—**	**—**	**—**	**—**
– transfers from stage 3	**740**	**(61)**	**1,769**	**(258)**	**(2,509)**	**319**	**—**	**—**	**—**	**—**
Net remeasurement of ECL arising from transfer of stage	**—**	**739**	**—**	**(953)**	**—**	**(152)**	**—**	**—**	**—**	**(366)**
New financial assets originated or purchased	**483,617**	**(548)**	**—**	**—**	**—**	**—**	**26**	**(2)**	**483,643**	**(550)**
Assets derecognised (including final repayments)	**(318,659)**	**148**	**(37,941)**	**343**	**(2,806)**	**416**	**(97)**	**—**	**(359,503)**	**907**
Changes to risk parameters – further lending/repayment	**(65,778)**	**226**	**(6,963)**	**93**	**(594)**	**259**	**(61)**	**5**	**(73,396)**	**583**
Changes to risk parameters – credit quality	**—**	**403**	**—**	**(1,670)**	**—**	**(3,019)**	**—**	**32**	**—**	**(4,254)**
Changes to models used for ECL calculation	**—**	**4**	**—**	**(151)**	**—**	**13**	**—**	**—**	**—**	**(134)**
Assets written off	**—**	**—**	**—**	**—**	**(2,794)**	**2,794**	**(10)**	**10**	**(2,804)**	**2,804**
Credit-related modifications that resulted in derecognition	**—**	**—**	**—**	**—**	**(32)**	**9**	**—**	**—**	**(32)**	**9**
Foreign exchange	**(81,975)**	**59**	**(8,811)**	**170**	**(1,395)**	**323**	**(3)**	**1**	**(92,184)**	**553**
Others[1]	**(60,557)**	**64**	**(13,716)**	**161**	**(938)**	**158**	**—**	**(20)**	**(75,211)**	**363**
At 31 Dec 2022	**1,435,208**	**(1,260)**	**177,363**	**(3,713)**	**21,208**	**(6,949)**	**129**	**(38)**	**1,633,908**	**(11,960)**
ECL income statement change for the period		**972**		**(2,338)**		**(2,483)**		**35**		**(3,814)**
Recoveries										**316**
Others										**(26)**
Total ECL income statement change for the period										**(3,524)**

1 *Total includes $82.7bn of gross carrying loans and advances to customers and banks, which were classified to assets held for sale, and a corresponding allowance for ECL of $426m, reflecting business disposals as disclosed in Note 23 'Assets held for sale and liabilities of disposal groups held for sale' on page 389.*

	At 31 Dec 2022		12 months ended 31 Dec 2022
	Gross carrying/ nominal amount	Allowance for ECL	ECL charge
	$m	$m	$m
As above	**1,633,908**	**(11,960)**	**(3,524)**
Other financial assets measured at amortised cost	**1,014,498**	**(553)**	**(41)**
Non-trading reverse purchase agreement commitments	**44,921**	**—**	**—**
Performance and other guarantees not considered for IFRS 9	**—**	**—**	**41**
Summary of financial instruments to which the impairment requirements in IFRS 9 are applied/Summary consolidated income statement	**2,693,327**	**(12,513)**	**(3,524)**
Debt instruments measured at FVOCI	**266,303**	**(145)**	**(68)**
Total allowance for ECL/total income statement ECL change for the period	**n/a**	**(12,658)**	**(3,592)**

As shown in the previous table, the allowance for ECL for loans and advances to customers and banks and relevant loan commitments and financial guarantees increased $85m during the period from $11,875m at 31 December 2021 to $11,960m at 31 December 2022.

This increase was primarily driven by:

- $4,254m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages;

- $366m relating to the net remeasurement impact of stage transfers; and
- $134m of changes to models used for ECL calculation.

These were partly offset by:

- $2,804m of assets written off;
- $940m relating to volume movements, which included the ECL allowance associated with new originations, assets derecognised and further lending/repayment; and
- foreign exchange and other movements of $916m.

The ECL charge for the period of $3,814m presented in the previous table consisted of $4,254m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages, $366m relating to the net remeasurement impact of stage transfers, and $134m in changes to models used for ECL calculation. This was partly offset by $940m relating to underlying net book volume movement.

Summary views of the movement in wholesale and personal lending are presented on pages 173 and 191.

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired					
	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross exposure	Allowance / provision for ECL	Gross exposure	Allowance / provision for ECL	Gross exposure	Allowance/ provision for ECL	Gross exposure	Allowance / provision for ECL	Gross exposure	Allowance/ provision for ECL
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2021	1,506,451	(2,331)	223,432	(5,403)	20,424	(7,544)	279	(113)	1,750,586	(15,391)
Transfers of financial instruments:	21,107	(1,792)	(27,863)	2,601	6,756	(809)	—	—	—	—
– transfers from stage 1 to stage 2	(159,633)	527	159,633	(527)	—	—	—	—	—	—
– transfers from stage 2 to stage 1	182,432	(2,279)	(182,432)	2,279	—	—	—	—	—	—
– transfers to stage 3	(2,345)	24	(6,478)	1,010	8,823	(1,034)	—	—	—	—
– transfers from stage 3	653	(64)	1,414	(161)	(2,067)	225	—	—	—	—
Net remeasurement of ECL arising from transfer of stage	—	1,225	—	(596)	—	(34)	—	—	—	595
New financial assets originated or purchased	444,070	(553)	—	—	—	—	124	—	444,194	(553)
Assets derecognised (including final repayments)	(304,158)	174	(31,393)	489	(2,750)	458	(10)	6	(338,311)	1,127
Changes to risk parameters – further lending/repayment	(61,742)	547	(3,634)	498	(1,268)	576	(108)	12	(66,752)	1,633
Changes to risk parameters – credit quality	—	1,111	—	(1,012)	—	(2,354)	—	28	—	(2,227)
Changes to models used for ECL calculation	—	(17)	—	(33)	—	1	—	—	—	(49)
Assets written off	—	—	—	—	(2,610)	2,605	(7)	7	(2,617)	2,612
Credit-related modifications that resulted in derecognition	—	—	—	—	(125)	—	—	—	(125)	—
Foreign exchange	(25,231)	26	(2,918)	45	(479)	157	(4)	1	(28,632)	229
Others[1]	(2,915)	53	(1,882)	85	(151)	16	—	(5)	(4,948)	149
At 31 Dec 2021	1,577,582	(1,557)	155,742	(3,326)	19,797	(6,928)	274	(64)	1,753,395	(11,875)
ECL income statement change for the period		2,487		(654)		(1,353)		46		526
Recoveries										409
Others										(111)
Total ECL income statement change for the period										824

1 *Total includes $3.0bn of gross carrying loans and advances to customers, which were classified to assets held for sale, and a corresponding allowance for ECL of $123m, reflecting our exit of the domestic mass market retail banking in the US.*

	At 31 Dec 2021		12 months ended 31 Dec 2021
	Gross carrying/ nominal amount	Allowance for ECL	ECL charge
	$m	$m	$m
As above	1,753,395	(11,875)	824
Other financial assets measured at amortised cost	880,351	(193)	(19)
Non-trading reverse purchase agreement commitments	42,421	—	—
Performance and other guarantees not considered for IFRS 9	—	—	75
Summary of financial instruments to which the impairment requirements in IFRS 9 are applied/Summary consolidated income statement	2,676,167	(12,068)	880
Debt instruments measured at FVOCI	347,203	(96)	48
Total allowance for ECL/total income statement ECL change for the period	n/a	(12,164)	928

Credit quality

Credit quality of financial instruments

(Audited)

We assess the credit quality of all financial instruments that are subject to credit risk. The credit quality of financial instruments is a point-in-time assessment of PD, whereas stages 1 and 2 are determined based on relative deterioration of credit quality since initial recognition for the majority of portfolios. Accordingly, for non-credit-impaired financial instruments, there is no direct relationship between the credit quality assessment and stages 1 and 2, although typically the lower credit quality bands exhibit a higher proportion in stage 2.

The five credit quality classifications provided below each encompass a range of granular internal credit rating grades assigned to wholesale and personal lending businesses and the external ratings attributed by external agencies to debt securities, as shown in the table on page 146.

Distribution of financial instruments by credit quality at 31 December 2022

(Audited)

	Gross carrying/notional amount						Allowance for ECL/ other credit provisions	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total		
	$m	$m	$m	$m	$m	$m	$m	$m
In-scope for IFRS 9 ECL								
Loans and advances to customers held at amortised cost	492,848	197,560	196,819	29,446	19,634	936,307	(11,453)	924,854
– personal	333,838	45,696	28,942	3,196	3,340	415,012	(2,872)	412,140
– corporate and commercial	126,659	132,847	154,135	24,890	15,825	454,356	(8,324)	446,032
– non-bank financial institutions	32,351	19,017	13,742	1,360	469	66,939	(257)	66,682
Loans and advances to banks held at amortised cost	93,025	4,890	5,643	1,311	82	104,951	(69)	104,882
Cash and balances at central banks	325,119	1,296	590	—	—	327,005	(3)	327,002
Items in the course of collection from other banks	7,280	12	5	—	—	7,297	—	7,297
Hong Kong Government certificates of indebtedness	43,787	—	—	—	—	43,787	—	43,787
Reverse repurchase agreements – non-trading	170,386	41,659	41,686	20	3	253,754	—	253,754
Financial investments	151,385	14,113	3,121	161	47	168,827	(80)	168,747
Assets held for sale	67,617	17,993	13,972	2,333	641	102,556	(415)	102,141
Other assets	91,114	10,911	8,821	274	152	111,272	(55)	111,217
– endorsements and acceptances	2,350	3,059	2,815	175	25	8,424	(17)	8,407
– accrued income and other	88,764	7,852	6,006	99	127	102,848	(38)	102,810
Debt instruments measured at fair value through other comprehensive income[1]	261,247	10,132	5,981	1,949	42	279,351	(145)	279,206
Out-of-scope for IFRS 9								
Trading assets	91,330	14,371	23,415	820	133	130,069	—	130,069
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	6,281	809	1,785	110	—	8,985	—	8,985
Derivatives	241,905	34,181	7,843	181	36	284,146	—	284,146
Assets held for sale	15,254	—	—	—	—	15,254	—	15,254
Total gross carrying amount on balance sheet	2,058,578	347,927	309,681	36,605	20,770	2,773,561	(12,220)	2,761,341
Percentage of total credit quality	74.2%	12.5%	11.2%	1.3%	0.8%	100%		
Loan and other credit-related commitments	402,972	132,402	74,410	7,632	1,372	618,788	(386)	618,402
Financial guarantees	8,281	4,669	4,571	1,013	249	18,783	(52)	18,731
In-scope: Irrevocable loan commitments and financial guarantees	411,253	137,071	78,981	8,645	1,621	637,571	(438)	637,133
Loan and other credit-related commitments	76,095	69,667	59,452	3,360	489	209,063	—	209,063
Performance and other guarantees	37,943	30,029	17,732	2,137	399	88,240	(110)	88,130
Out-of-scope: Revocable loan commitments and non-financial guarantees	114,038	99,696	77,184	5,497	888	297,303	(110)	297,193

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset before adjusting for any loss allowance. As such, the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Distribution of financial instruments by credit quality at 31 December 2021 (continued)

(Audited)

	Gross carrying/notional amount						Allowance for ECL/other credit provisions	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total		
	$m	$m	$m	$m	$m	$m	$m	$m
In-scope for IFRS 9 ECL								
Loans and advances to customers held at amortised cost	544,695	230,326	233,739	29,404	19,067	1,057,231	(11,417)	1,045,814
– personal	388,903	52,080	30,492	1,920	4,942	478,337	(3,103)	475,234
– corporate and commercial	124,819	158,938	188,858	27,194	13,730	513,539	(8,204)	505,335
– non-bank financial institutions	30,973	19,308	14,389	290	395	65,355	(110)	65,245
Loans and advances to banks held at amortised cost	72,978	4,037	5,020	1,118	—	83,153	(17)	83,136
Cash and balances at central banks	400,176	1,675	1,171	—	—	403,022	(4)	403,018
Items in the course of collection from other banks	4,122	10	4	—	—	4,136	—	4,136
Hong Kong Government certificates of indebtedness	42,578	—	—	—	—	42,578	—	42,578
Reverse repurchase agreements – non-trading	175,576	46,412	18,881	779	—	241,648	—	241,648
Financial investments	84,477	11,442	1,401	1	43	97,364	(62)	97,302
Assets held for sale	560	1,112	936	110	141	2,859	(43)	2,816
Other assets	66,537	10,997	10,749	298	163	88,744	(84)	88,660
– endorsements and acceptances	1,742	5,240	4,038	199	26	11,245	(17)	11,228
– accrued income and other	64,795	5,757	6,711	99	137	77,499	(67)	77,432
Debt instruments measured at fair value through other comprehensive income[1]	320,161	12,298	11,677	1,087	46	345,269	(96)	345,173
Out-of-scope for IFRS 9								
Trading assets	101,879	16,254	20,283	678	134	139,228	—	139,228
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	6,438	723	4,455	150	—	11,766	—	11,766
Derivatives	146,748	42,717	6,691	719	7	196,882	—	196,882
Total gross carrying amount on balance sheet	1,966,925	378,003	315,007	34,344	19,601	2,713,880	(11,723)	2,702,157
Percentage of total credit quality	72.5%	13.9%	11.6%	1.3%	0.7%	100%		
Loan and other credit-related commitments	389,865	136,297	92,558	8,142	775	627,637	(379)	627,258
Financial guarantees	16,511	4,902	5,166	991	225	27,795	(62)	27,733
In-scope: Irrevocable loan commitments and financial guarantees	406,376	141,199	97,724	9,133	1,000	655,432	(441)	654,991
Loan and other credit-related commitments	62,701	65,031	56,446	3,327	332	187,837	—	187,837
Performance and other guarantees	31,510	32,193	19,265	2,027	539	85,534	(179)	85,355
Out-of-scope: Revocable loan commitments and non-financial guarantees	94,211	97,224	75,711	5,354	871	273,371	(179)	273,192

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset before adjusting for any loss allowance. As such, the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Distribution of financial instruments to which the impairment requirements in IFRS 9 are applied, by credit quality and stage allocation

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	492,848	197,560	196,819	29,446	19,634	936,307	(11,453)	924,854
– stage 1	458,843	170,875	142,695	5,130	—	777,543	(1,095)	776,448
– stage 2	34,005	26,685	54,124	24,316	—	139,130	(3,491)	135,639
– stage 3	—	—	—	—	19,505	19,505	(6,829)	12,676
– POCI	—	—	—	—	129	129	(38)	91
Loans and advances to banks at amortised cost	93,025	4,890	5,643	1,311	82	104,951	(69)	104,882
– stage 1	92,696	4,465	5,466	415	—	103,042	(18)	103,024
– stage 2	329	425	177	896	—	1,827	(29)	1,798
– stage 3	—	—	—	—	82	82	(22)	60
– POCI	—	—	—	—	—	—	—	—
Other financial assets measured at amortised cost	856,688	85,984	68,195	2,788	843	1,014,498	(553)	1,013,945
– stage 1	855,523	80,175	60,583	208	—	996,489	(124)	996,365
– stage 2	1,165	5,809	7,612	2,580	—	17,166	(188)	16,978
– stage 3	—	—	—	—	797	797	(234)	563
– POCI	—	—	—	—	46	46	(7)	39
Loan and other credit-related commitments	402,972	132,402	74,410	7,632	1,372	618,788	(386)	618,402
– stage 1	398,120	121,581	60,990	2,692	—	583,383	(141)	583,242
– stage 2	4,852	10,821	13,420	4,940	—	34,033	(180)	33,853
– stage 3	—	—	—	—	1,372	1,372	(65)	1,307
– POCI	—	—	—	—	—	—	—	—
Financial guarantees	8,281	4,669	4,571	1,013	249	18,783	(52)	18,731
– stage 1	8,189	4,245	3,488	149	—	16,071	(6)	16,065
– stage 2	92	424	1,083	864	—	2,463	(13)	2,450
– stage 3	—	—	—	—	249	249	(33)	216
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2022	1,853,814	425,505	349,638	42,190	22,180	2,693,327	(12,513)	2,680,814
Debt instruments at FVOCI[1]								
– stage 1	260,941	10,000	5,690	—	—	276,631	(68)	276,563
– stage 2	306	132	291	1,949	—	2,678	(69)	2,609
– stage 3	—	—	—	—	5	5	(1)	4
– POCI	—	—	—	—	37	37	(7)	30
At 31 Dec 2022	261,247	10,132	5,981	1,949	42	279,351	(145)	279,206

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset before adjusting for any loss allowance. As such, the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Distribution of financial instruments to which the impairment requirements in IFRS 9 are applied, by credit quality and stage allocation (continued)

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	544,695	230,326	233,739	29,404	19,067	1,057,231	(11,417)	1,045,814
– stage 1	537,642	206,645	169,809	4,840	—	918,936	(1,367)	917,569
– stage 2	7,053	23,681	63,930	24,560	—	119,224	(3,119)	116,105
– stage 3	—	—	—	—	18,797	18,797	(6,867)	11,930
– POCI	—	—	—	4	270	274	(64)	210
Loans and advances to banks at amortised cost	72,978	4,037	5,020	1,118	—	83,153	(17)	83,136
– stage 1	72,903	3,935	4,788	10	—	81,636	(14)	81,622
– stage 2	75	102	232	1,108	—	1,517	(3)	1,514
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	—	—	—	—
Other financial assets measured at amortised cost	774,026	71,648	33,142	1,188	347	880,351	(193)	880,158
– stage 1	773,427	70,508	30,997	84	—	875,016	(91)	874,925
– stage 2	599	1,140	2,145	1,104	—	4,988	(54)	4,934
– stage 3	—	—	—	—	304	304	(42)	262
– POCI	—	—	—	—	43	43	(6)	37
Loan and other credit-related commitments	389,865	136,297	92,558	8,142	775	627,637	(379)	627,258
– stage 1	387,434	129,455	76,043	1,541	—	594,473	(165)	594,308
– stage 2	2,431	6,842	16,515	6,601	—	32,389	(174)	32,215
– stage 3	—	—	—	—	775	775	(40)	735
– POCI	—	—	—	—	—	—	—	—
Financial guarantees	16,511	4,902	5,166	991	225	27,795	(62)	27,733
– stage 1	16,351	4,469	3,929	183	—	24,932	(11)	24,921
– stage 2	160	433	1,237	808	—	2,638	(30)	2,608
– stage 3	—	—	—	—	225	225	(21)	204
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2021	1,798,075	447,210	369,625	40,843	20,414	2,676,167	(12,068)	2,664,099
Debt instruments at FVOCI[1]								
– stage 1	319,557	12,196	11,354	—	—	343,107	(67)	343,040
– stage 2	604	102	323	1,087	—	2,116	(22)	2,094
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	46	46	(7)	39
At 31 Dec 2021	320,161	12,298	11,677	1,087	46	345,269	(96)	345,173

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset before adjusting for any loss allowance. As such, the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Credit-impaired loans

(Audited)

We determine that a financial instrument is credit impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay, such as when a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default. If such unlikeliness to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore, the definitions of credit impaired and default are aligned as far as possible so that stage 3 represents all loans that are considered defaulted or otherwise credit impaired.

Forbearance

The following table shows the gross carrying amounts and allowances for ECL of the Group's holdings of forborne loans and advances to customers by industry sector and by stages.

A summary of our current policies and practices for forbearance is set out in 'Credit risk management' on page 145.

Forborne loans and advances to customers at amortised cost by stage allocation

	Performing – forborne		Non-performing – forborne		Total – forborne
	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m
Gross carrying amount					
Personal	**—**	**651**	**1,171**	**—**	**1,822**
– first lien residential mortgages	**—**	**369**	**738**	**—**	**1,107**
– second lien residential mortgages	**—**	**—**	**7**	**—**	**7**
– guaranteed loans in respect of residential property	**—**	**—**	**4**	**—**	**4**
– other personal lending which is secured	**—**	**5**	**13**	**—**	**18**
– credit cards	**—**	**93**	**75**	**—**	**168**
– other personal lending which is unsecured	**—**	**179**	**334**	**—**	**513**
– motor vehicle finance	**—**	**5**	**—**	**—**	**5**
Wholesale	**—**	**4,873**	**4,576**	**107**	**9,556**
– corporate and commercial	**—**	**4,859**	**4,562**	**107**	**9,528**
– non-bank financial institutions	**—**	**14**	**14**	**—**	**28**
At 31 Dec 2022	**—**	**5,524**	**5,747**	**107**	**11,378**
Allowance for ECL					
Personal	**—**	**(124)**	**(302)**	**—**	**(426)**
– first lien residential mortgages	**—**	**(49)**	**(118)**	**—**	**(167)**
– second lien residential mortgages	**—**	**—**	**(3)**	**—**	**(3)**
– guaranteed loans in respect of residential property	**—**	**—**	**(3)**	**—**	**(3)**
– other personal lending which is secured	**—**	**—**	**(2)**	**—**	**(2)**
– credit cards	**—**	**(19)**	**(44)**	**—**	**(63)**
– other personal lending which is unsecured	**—**	**(54)**	**(132)**	**—**	**(186)**
– motor vehicle finance	**—**	**(2)**	**—**	**—**	**(2)**
Wholesale	**—**	**(152)**	**(1,497)**	**(25)**	**(1,674)**
– corporate and commercial	**—**	**(151)**	**(1,490)**	**(25)**	**(1,666)**
– non-bank financial institutions	**—**	**(1)**	**(7)**	**—**	**(8)**
At 31 Dec 2022	**—**	**(276)**	**(1,799)**	**(25)**	**(2,100)**
Gross carrying amount					
Personal	—	—	2,256	—	2,256
– first lien residential mortgages	—	—	1,547	—	1,547
– second lien residential mortgages	—	—	22	—	22
– guaranteed loans in respect of residential property	—	—	23	—	23
– other personal lending which is secured	—	—	39	—	39
– credit cards	—	—	168	—	168
– other personal lending which is unsecured	—	—	456	—	456
– motor vehicle finance	—	—	1	—	1
Wholesale	366	559	4,505	253	5,683
– corporate and commercial	355	550	4,491	253	5,649
– non-bank financial institutions	11	9	14	—	34
At 31 Dec 2021[1]	366	559	6,761	253	7,939
Allowance for ECL					
Personal	—	—	(400)	—	(400)
– first lien residential mortgages	—	—	(178)	—	(178)
– second lien residential mortgages	—	—	(6)	—	(6)
– guaranteed loans in respect of residential property	—	—	(7)	—	(7)
– other personal lending which is secured	—	—	(5)	—	(5)
– credit cards	—	—	(53)	—	(53)
– other personal lending which is unsecured	—	—	(151)	—	(151)
– motor vehicle finance	—	—	—	—	—
Wholesale	(7)	(24)	(1,282)	(52)	(1,365)
– corporate and commercial	(7)	(24)	(1,274)	(52)	(1,357)
– non-bank financial institutions	—	—	(8)	—	(8)
At 31 Dec 2021[1]	(7)	(24)	(1,682)	(52)	(1,765)

1 *Forborne exposures and allowances for ECL at 31 December 2021 have not been restated and agreed with the policies and disclosures presented in the* Annual Report and Accounts 2021.

Following the adoption of the EBA 'Guidelines on the application of definition of default', retail and wholesale loans are identified as forborne and classified as either performing or non-performing when we modify the contractual terms due to financial difficulty of the borrower. At 31 December 2022, we reported $5,524m (31 December 2021: $925m) of performing forborne loans. The increase of $4,599m was mainly driven by the inclusion of non-payment-related concessions in the forbearance assessment since 1 January 2022.

Forborne loans and advances to customers by geographical region

	Europe	Asia	MENA	North America	Latin America	Total	of which: UK	of which: Hong Kong
	$m	$m	$m	$m	$m	$m	$m	$m
Gross carrying amount								
Performing forborne	**3,121**	**276**	**482**	**1,100**	**545**	**5,524**	***1,028***	***134***
Non-performing forborne	**2,636**	**1,562**	**1,076**	**368**	**212**	**5,854**	***2,126***	***879***
At 31 Dec 2022	**5,757**	**1,838**	**1,558**	**1,468**	**757**	**11,378**	***3,154***	***1,013***
Allowances for ECL								
Performing forborne	**(95)**	**(21)**	**(19)**	**(62)**	**(79)**	**(276)**	***(64)***	***(17)***
Non-performing forborne	**(566)**	**(525)**	**(536)**	**(83)**	**(114)**	**(1,824)**	***(441)***	***(355)***
At 31 Dec 2022	**(661)**	**(546)**	**(555)**	**(145)**	**(193)**	**(2,100)**	***(505)***	***(372)***
Gross carrying amount								
Performing forborne	698	5	105	89	28	925	*640*	—
Non-performing forborne	3,421	1,317	849	975	452	7,014	*2,829*	*528*
At 31 Dec 2021[1]	4,119	1,322	954	1,064	480	7,939	*3,469*	*528*
Allowances for ECL								
Performing forborne	(13)	—	(9)	(8)	(1)	(31)	*(10)*	—
Non-performing forborne	(615)	(306)	(475)	(138)	(200)	(1,734)	*(459)*	*(89)*
At 31 Dec 2021[1]	(628)	(306)	(484)	(146)	(201)	(1,765)	*(469)*	*(89)*

1 *Forborne exposures and allowances for ECL at 31 December 2021 have not been restated and agreed with the policies and disclosures presented in the* Annual Report and Accounts 2021.

Wholesale lending

This section provides further details on the regions, countries, territories and products comprising wholesale loans and advances to customers and banks. Product granularity is also provided by stage with geographical data presented for loans and advances to customers, banks, other credit commitments, financial guarantees and similar contracts. Additionally, this section provides a reconciliation of the opening 1 January 2022 to 31 December 2022 closing gross carrying/nominal amounts and the associated allowance for ECL.

At 31 December 2022, wholesale lending for loans and advances to banks and customers of $626.2bn decreased by $35.8bn since 31 December 2021. This included adverse foreign exchange movements of $31.9bn. Excluding foreign exchange movements, the total wholesale lending decrease of $3.9bn was driven by a $34.3bn decline in corporate and commercial balances. This was partly offset by a $25.9bn increase in loans and advances to banks and a $4.5bn increase in balances from non-bank financial institutions.

The primary driver of the decline in corporate and commercial balances was the $23.4bn reclassification of our banking business in Canada to held for sale, and a decline of $11.3bn in Asia. In Asia, the decline was driven from a $17.3bn decrease in Hong Kong, partly offset by growth of $2.4bn in Australia, $1.9b in Japan and $1.7bn in India.

Growth in loans and advances to banks was mainly driven by a $13.0bn increase in Asia, a $10.1bn increase in Europe, and a $2.6bn increase in MENA. In Asia, the increase can be largely attributed to $7.9bn in Hong Kong and $1.5bn in Malaysia. In Europe, the growth was mainly from the UK with an increase of $10.6bn.

The increase in balances from non-bank financial institutions was driven from an increase of $3.7bn in Asia and $2.0bn in Europe. This growth was partly offset by a decline of $1.3bn in North America, of which $1.4bn was due to the reclassification of our banking business in Canada to held for sale, and a $0.1bn increase in the US.

Loan commitments and financial guarantees decreased by $22.2bn since 31 December 2021 to $392.4bn at 31 December 2022, including a $3.0bn increase related to unsettled reverse repurchase agreements. This also included adverse foreign exchange movements of $21.8bn.

The allowance for ECL attributable to wholesale loans and advances to banks and customers increased by $0.3bn to $8.7bn at 31 December 2022. This included favourable foreign exchange movements of $0.4bn.

Excluding foreign exchange movements, the total increase in the wholesale ECL allowance for loans and advances to customers and banks was driven by a $0.5bn growth in corporate and commercial allowances. The primary driver of this increase in corporate and commercial allowance for ECL was $1.1bn in Asia, notably $1.4bn in Hong Kong, which was partly offset by a decline of $0.4bn in Singapore. Allowances for ECL decreased by $0.2bn in North America, and by $0.1bn in both Europe and Latin America.

The allowance for ECL attributable to loan commitments and financial guarantees at 31 December 2022 remained at $0.4bn from 31 December 2021.

Total wholesale lending for loans and advances to banks and customers by stage distribution

	Gross carrying amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Corporate and commercial	353,010	85,521	15,696	129	454,356	(490)	(1,909)	(5,887)	(38)	(8,324)
– agriculture, forestry and fishing	4,805	1,505	261	—	6,571	(10)	(44)	(68)	—	(122)
– mining and quarrying	6,498	1,463	232	1	8,194	(5)	(21)	(145)	(1)	(172)
– manufacturing	70,187	15,251	2,016	49	87,503	(93)	(164)	(867)	(29)	(1,153)
– electricity, gas, steam and air-conditioning supply	15,006	1,799	277	—	17,082	(11)	(31)	(67)	—	(109)
– water supply, sewerage, waste management and remediation	2,690	277	26	—	2,993	(3)	(5)	(13)	—	(21)
– construction	9,692	2,742	791	7	13,232	(21)	(51)	(368)	(3)	(443)
– wholesale and retail trade, repair of motor vehicles and motorcycles	63,755	15,872	2,805	5	82,437	(96)	(226)	(1,341)	(3)	(1,666)
– transportation and storage	19,227	5,062	556	—	24,845	(31)	(65)	(153)	—	(249)
– accommodation and food	9,873	6,523	787	2	17,185	(23)	(139)	(81)	(1)	(244)
– publishing, audiovisual and broadcasting	16,609	1,537	249	28	18,423	(22)	(36)	(58)	(1)	(117)
– real estate	72,195	24,386	4,834	19	101,434	(86)	(904)	(1,861)	—	(2,851)
– professional, scientific and technical activities	15,164	2,229	542	—	17,935	(21)	(51)	(200)	—	(272)
– administrative and support services	20,592	3,505	962	18	25,077	(25)	(90)	(293)	—	(408)
– public administration and defence, compulsory social security	1,166	14	—	—	1,180	—	(1)	—	—	(1)
– education	1,346	181	87	—	1,614	(4)	(5)	(22)	—	(31)
– health and care	3,055	643	266	—	3,964	(6)	(17)	(67)	—	(90)
– arts, entertainment and recreation	1,264	452	146	—	1,862	(4)	(16)	(57)	—	(77)
– other services	10,391	1,547	589	—	12,527	(26)	(30)	(219)	—	(275)
– activities of households	730	14	—	—	744	—	—	—	—	—
– extra-territorial organisations and bodies activities	47	—	—	—	47	—	—	—	—	—
– government	8,699	506	270	—	9,475	(3)	—	(7)	—	(10)
– asset-backed securities	19	13	—	—	32	—	(13)	—	—	(13)
Non-bank financial institutions	61,752	4,718	469	—	66,939	(43)	(77)	(137)	—	(257)
Loans and advances to banks	103,042	1,827	82	—	104,951	(18)	(29)	(22)	—	(69)
At 31 Dec 2022	517,804	92,066	16,247	129	626,246	(551)	(2,015)	(6,046)	(38)	(8,650)
By geography										
Europe	150,592	28,060	7,070	31	185,753	(223)	(628)	(1,718)	(1)	(2,570)
– of which: UK	*104,595*	*21,489*	*5,432*	*28*	*131,544*	*(186)*	*(501)*	*(1,015)*	*(1)*	*(1,703)*
Asia	293,503	50,826	6,938	81	351,348	(220)	(1,077)	(3,125)	(25)	(4,447)
– of which: Hong Kong	*155,513*	*28,275*	*5,338*	*57*	*189,183*	*(104)*	*(775)*	*(2,136)*	*(22)*	*(3,037)*
MENA	29,512	3,254	1,530	17	34,313	(22)	(49)	(909)	(12)	(992)
North America	31,372	6,950	245	—	38,567	(25)	(197)	(44)	—	(266)
Latin America	12,825	2,976	464	—	16,265	(61)	(64)	(250)	—	(375)
At 31 Dec 2022	517,804	92,066	16,247	129	626,246	(551)	(2,015)	(6,046)	(38)	(8,650)

Total wholesale lending for loans and other credit-related commitments and financial guarantees by stage distribution[1]

	Nominal amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Corporate and commercial	252,860	29,116	798	—	282,774	(116)	(178)	(96)	—	(390)
Financial	105,950	3,683	23	—	109,656	(5)	(14)	(2)	—	(21)
At 31 Dec 2022	358,810	32,799	821	—	392,430	(121)	(192)	(98)	—	(411)
By geography										
Europe	168,179	17,235	498	—	185,912	(41)	(87)	(85)	—	(213)
– of which: UK	*60,532*	*9,941*	*278*	—	*70,751*	*(34)*	*(64)*	*(46)*	—	*(144)*
Asia	67,473	6,081	114	—	73,668	(54)	(53)	(9)	—	(116)
– of which: Hong Kong	*27,102*	*2,448*	*46*	—	*29,596*	*(14)*	*(27)*	*(2)*	—	*(43)*
MENA	7,500	565	21	—	8,086	(4)	(5)	(2)	—	(11)
North America	112,695	8,642	185	—	121,522	(21)	(47)	(2)	—	(70)
Latin America	2,963	276	3	—	3,242	(1)	—	—	—	(1)
At 31 Dec 2022	358,810	32,799	821	—	392,430	(121)	(192)	(98)	—	(411)

1 *Included in loans and other credit-related commitments and financial guarantees is $45bn relating to unsettled reverse repurchase agreements, which once drawn are classified as 'Reverse repurchase agreements – non-trading'.*

Total wholesale lending for loans and advances to banks and customers by stage distribution

	Gross carrying amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Corporate and commercial	400,894	98,911	13,460	274	513,539	(665)	(1,874)	(5,601)	(64)	(8,204)
– agriculture, forestry and fishing	6,510	1,026	362	1	7,899	(10)	(23)	(104)	(1)	(138)
– mining and quarrying	7,167	2,055	447	16	9,685	(17)	(39)	(159)	(12)	(227)
– manufacturing	75,193	16,443	2,019	88	93,743	(110)	(176)	(931)	(31)	(1,248)
– electricity, gas, steam and air-conditioning supply	15,255	1,285	78	—	16,618	(16)	(21)	(31)	—	(68)
– water supply, sewerage, waste management and remediation	3,376	468	51	—	3,895	(5)	(4)	(20)	—	(29)
– construction	9,506	3,605	842	1	13,954	(24)	(44)	(439)	(1)	(508)
– wholesale and retail trade, repair of motor vehicles and motorcycles	79,137	12,802	3,003	2	94,944	(71)	(99)	(1,936)	(1)	(2,107)
– transportation and storage	21,199	7,726	658	9	29,592	(56)	(116)	(191)	—	(363)
– accommodation and food	8,080	14,096	1,199	1	23,376	(67)	(245)	(110)	(1)	(423)
– publishing, audiovisual and broadcasting	16,417	1,804	222	28	18,471	(37)	(47)	(94)	(6)	(184)
– real estate	93,633	25,154	2,375	98	121,260	(132)	(737)	(775)	—	(1,644)
– professional, scientific and technical activities	16,160	2,888	637	—	19,685	(26)	(40)	(172)	—	(238)
– administrative and support services	23,186	4,740	719	30	28,675	(40)	(84)	(296)	(11)	(431)
– public administration and defence, compulsory social security	938	333	—	—	1,271	(5)	(3)	—	—	(8)
– education	1,455	273	65	—	1,793	(4)	(15)	(18)	—	(37)
– health and care	3,743	928	183	—	4,854	(11)	(24)	(37)	—	(72)
– arts, entertainment and recreation	1,620	826	152	—	2,598	(6)	(44)	(42)	—	(92)
– other services	10,123	1,726	448	—	12,297	(26)	(101)	(246)	—	(373)
– activities of households	860	117	—	—	977	—	—	—	—	—
– extra-territorial organisations and bodies activities	2	—	—	—	2	—	—	—	—	—
– government	7,010	602	—	—	7,612	(2)	(2)	—	—	(4)
– asset-backed securities	324	14	—	—	338	—	(10)	—	—	(10)
Non-bank financial institutions	61,086	3,874	395	—	65,355	(44)	(26)	(40)	—	(110)
Loans and advances to banks	81,636	1,517	—	—	83,153	(14)	(3)	—	—	(17)
At 31 Dec 2021	543,616	104,302	13,855	274	662,047	(723)	(1,903)	(5,641)	(64)	(8,331)
By geography										
Europe	154,575	31,871	6,741	30	193,217	(356)	(654)	(1,806)	(9)	(2,825)
– of which: UK	*101,029*	*24,461*	*5,126*	*28*	*130,644*	*(306)*	*(518)*	*(1,060)*	*(6)*	*(1,890)*
Asia	297,423	53,993	3,997	199	355,612	(182)	(830)	(2,299)	(43)	(3,354)
– of which: Hong Kong	*165,437*	*30,305*	*1,990*	*159*	*197,891*	*(85)*	*(650)*	*(836)*	*(21)*	*(1,592)*
MENA	26,135	5,295	1,682	22	33,134	(62)	(108)	(1,028)	(11)	(1,209)
North America	53,513	10,397	652	—	64,562	(57)	(215)	(169)	—	(441)
Latin America	11,970	2,746	783	23	15,522	(66)	(96)	(339)	(1)	(502)
At 31 Dec 2021	543,616	104,302	13,855	274	662,047	(723)	(1,903)	(5,641)	(64)	(8,331)

Total wholesale lending for loans and other credit-related commitments and financial guarantees by stage distribution[1]

	Nominal amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Corporate and commercial	274,775	30,376	829	—	305,980	(130)	(193)	(60)	—	(383)
Financial	105,746	2,889	2	—	108,637	(9)	(9)	(1)	—	(19)
At 31 Dec 2021	380,521	33,265	831	—	414,617	(139)	(202)	(61)	—	(402)
By geography										
Europe	189,770	15,585	673	—	206,028	(67)	(76)	(47)	—	(190)
– of which: UK	*68,136*	*8,430*	*389*	—	*76,955*	*(55)*	*(49)*	*(28)*	—	*(132)*
Asia	72,179	5,229	20	—	77,428	(35)	(40)	(5)	—	(80)
– of which: Hong Kong	*31,314*	*1,517*	*10*	—	*32,841*	*(11)*	*(17)*	*(2)*	—	*(30)*
MENA	6,335	1,017	19	—	7,371	(10)	(18)	(3)	—	(31)
North America	109,851	11,350	91	—	121,292	(24)	(66)	(1)	—	(91)
Latin America	2,386	84	28	—	2,498	(3)	(2)	(5)	—	(10)
At 31 Dec 2021	380,521	33,265	831	—	414,617	(139)	(202)	(61)	—	(402)

1 *Included in loans and other credit-related commitments and financial guarantees is $42bn relating to unsettled reverse repurchase agreements, which once drawn are classified as 'Reverse repurchase agreements – non-trading'.*

Wholesale lending – reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired					
	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**881,742**	**(862)**	**137,541**	**(2,105)**	**14,686**	**(5,702)**	**274**	**(64)**	**1,034,243**	**(8,733)**
Transfers of financial instruments	**(58,188)**	**(299)**	**49,569**	**943**	**8,619**	**(644)**	**—**	**—**	**—**	**—**
– transfers from stage 1 to stage 2	**(157,553)**	**201**	**157,553**	**(201)**	**—**	**—**	**—**	**—**	**—**	**—**
– transfers from stage 2 to stage 1	**100,839**	**(482)**	**(100,839)**	**482**	**—**	**—**	**—**	**—**	**—**	**—**
– transfers to stage 3	**(1,831)**	**7**	**(8,100)**	**771**	**9,931**	**(778)**			**—**	**—**
– transfers from stage 3	**357**	**(25)**	**955**	**(109)**	**(1,312)**	**134**	**—**	**—**	**—**	**—**
ECL arising from transfer of stage	**—**	**241**	**—**	**(370)**	**—**	**(64)**	**—**	**—**	**—**	**(193)**
New financial assets originated or purchased	**352,985**	**(277)**	**—**	**—**	**—**	**—**	**26**	**(2)**	**353,011**	**(279)**
Assets derecognised (including final repayments)	**(250,014)**	**54**	**(33,850)**	**73**	**(1,763)**	**292**	**(97)**	**—**	**(285,724)**	**419**
Changes to risk parameters – further lending/repayments	**(34,321)**	**64**	**(11,501)**	**128**	**(1,491)**	**292**	**(61)**	**5**	**(47,374)**	**489**
Change in risk parameters – credit quality	**—**	**321**	**—**	**(994)**	**—**	**(2,197)**	**—**	**32**	**—**	**(2,838)**
Changes to models used for ECL calculation	**—**	**6**	**—**	**(57)**	**—**	**—**	**—**	**—**	**—**	**(51)**
Assets written off	**—**	**—**	**—**	**—**	**(1,579)**	**1,579**	**(10)**	**10**	**(1,589)**	**1,589**
Credit-related modifications that resulted in derecognition	**—**	**—**	**—**	**—**	**(32)**	**9**	**—**	**—**	**(32)**	**9**
Foreign exchange and other[1]	**(60,421)**	**80**	**(16,984)**	**175**	**(1,372)**	**291**	**(3)**	**(19)**	**(78,780)**	**527**
At 31 Dec 2022	**831,783**	**(672)**	**124,775**	**(2,207)**	**17,068**	**(6,144)**	**129**	**(38)**	**973,755**	**(9,061)**
ECL income statement change for the period		**409**		**(1,220)**		**(1,677)**		**35**		**(2,453)**
Recoveries										**33**
Others										**(23)**
Total ECL income statement change for the period										**(2,443)**

1 *Total includes $33.1bn of gross carrying loans and advances to customers and banks, which were classified to assets held for sale, and a corresponding allowance for ECL of $204m, reflecting business disposals as disclosed in Note 23 'Assets held for sale and liabilities of disposal groups held for sale' on page 389.*

As shown in the above table, the allowance for ECL for loans and advances to customers and banks and relevant loan commitments and financial guarantees increased by $328m during the period from $8,733m at 31 December 2021 to $9,061m at 31 December 2022.

This increase was primarily driven by:

- $2,838m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages;
- $193m relating to the net remeasurement impact of stage transfers; and
- $51m of changes to models used for ECL calculation.

These were partly offset by:

- $1,589m of assets written off;
- $629m relating to volume movements, which included the ECL allowance associated with new originations, assets derecognised and further lending/repayments; and
- foreign exchange and other movements of $527m.

The ECL charge for the period of $2,453m presented in the previous table consisted of $2,838m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages, $193m relating to the net remeasurement impact of stage transfers and $51m in changes to models used for ECL calculation. This was partly offset by $629m relating to underlying net book volume movement.

During the period, there was a net transfer to stage 2 of $56,714m gross carrying/nominal amounts. The movement reflected the increased level of uncertainty around the macroeconomic outlook during the period. It was primarily driven by $29,049m in Asia, due to deterioration in the macroeconomic outlook affecting real estate portfolios booked in Hong Kong, and $20,860m in Europe, mainly driven by deterioration in the macroeconomic outlook affecting corporate and commercial portfolios in France.

Wholesale lending – reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired					
	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2021	841,105	(1,465)	196,662	(2,998)	14,662	(6,041)	279	(113)	1,052,708	(10,617)
Transfers of financial instruments	19,285	(638)	(23,361)	888	4,076	(250)	—	—	—	—
– transfers from stage 1 to stage 2	(135,932)	238	135,932	(238)	—	—	—	—	—	—
– transfers from stage 2 to stage 1	156,346	(875)	(156,346)	875	—	—	—	—	—	—
– transfers to stage 3	(1,363)	17	(3,410)	276	4,773	(293)	—	—	—	—
– transfers from stage 3	234	(18)	463	(25)	(697)	43	—	—	—	—
Net remeasurement of ECL arising from transfer of stage	—	400	—	(233)	—	(27)	—	—	—	140
New financial assets originated or purchased	307,150	(342)	—	—	—	—	124	—	307,274	(342)
Assets derecognised (including final repayments)	(221,160)	55	(26,136)	70	(1,514)	239	(10)	6	(248,820)	370
Changes to risk parameters – further lending/repayments	(47,766)	307	(6,014)	384	(987)	525	(108)	12	(54,875)	1,228
Changes to risk parameters – credit quality	—	793	—	(234)	—	(1,347)	—	28	—	(760)
Changes to models used for ECL calculation	—	(15)	—	(33)	—	—	—	—	—	(48)
Assets written off	—	—	—	—	(1,085)	1,085	(7)	7	(1,092)	1,092
Credit-related modifications that resulted in derecognition	—	—	—	—	(125)	—	—	—	(125)	—
Foreign exchange	(16,157)	9	(2,560)	26	(341)	112	(4)	1	(19,062)	148
Others	(715)	34	(1,050)	25	—	2	—	(5)	(1,765)	56
At 31 Dec 2021	881,742	(862)	137,541	(2,105)	14,686	(5,702)	274	(64)	1,034,243	(8,733)
ECL income statement change for the period		1,198		(46)		(610)		46		588
Recoveries										54
Others										(102)
Total ECL income statement change for the period										540

Wholesale lending – distribution of financial instruments to which the impairment requirements of IFRS 9 are applied by credit quality

	Gross carrying/nominal amount							
	Strong	**Good**	**Satisfactory**	**Sub-standard**	**Credit impaired**	**Total**	**Allowance for ECL**	**Net**
	$m	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
By geography								
Europe	**60,016**	**49,831**	**58,580**	**10,224**	**7,102**	**185,753**	**(2,570)**	**183,183**
– of which: UK	***44,515***	***38,521***	***36,934***	***6,115***	***5,459***	***131,544***	***(1,703)***	***129,841***
Asia	**167,720**	**81,907**	**84,973**	**9,735**	**7,013**	**351,348**	**(4,447)**	**346,901**
– of which: Hong Kong	***77,227***	***44,479***	***54,500***	***7,581***	***5,396***	***189,183***	***(3,037)***	***186,146***
MENA	**15,132**	**5,349**	**11,170**	**1,113**	**1,549**	**34,313**	**(992)**	**33,321**
North America	**7,445**	**13,390**	**12,856**	**4,630**	**246**	**38,567**	**(266)**	**38,301**
Latin America	**1,722**	**6,277**	**5,941**	**1,859**	**466**	**16,265**	**(375)**	**15,890**
At 31 Dec 2022	**252,035**	**156,754**	**173,520**	**27,561**	**16,376**	**626,246**	**(8,650)**	**617,596**
Percentage of total credit quality	**40.3%**	**25.0%**	**27.7%**	**4.4%**	**2.6%**	**100.0%**		
By geography								
Europe	48,758	49,254	74,240	14,196	6,769	193,217	(2,825)	190,392
– of which: UK	*30,390*	*37,212*	*48,694*	*9,192*	*5,156*	*130,644*	*(1,890)*	*128,754*
Asia	155,072	95,626	96,046	4,670	4,198	355,612	(3,354)	352,258
– of which: Hong Kong	*74,440*	*54,703*	*63,301*	*3,297*	*2,150*	*197,891*	*(1,592)*	*196,299*
MENA	12,264	7,004	10,321	1,844	1,701	33,134	(1,209)	31,925
North America	11,683	24,663	22,022	5,543	651	64,562	(441)	64,121
Latin America	993	5,736	5,638	2,349	806	15,522	(502)	15,020
At 31 Dec 2021	228,770	182,283	208,267	28,602	14,125	662,047	(8,331)	653,716
Percentage of total credit quality	34.6%	27.5%	31.5%	4.3%	2.1%	100.0%		

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the Group to support calculation of our minimum credit regulatory capital requirement. The credit quality classifications can be found on page 146.

Wholesale lending – credit risk profile by obligor grade for loans and advances at amortised cost

		Gross carrying amount					Allowance for ECL						
	Basel one-year PD range	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total	ECL coverage	Mapped external rating
	%	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	%	
Corporate and commercial		353,010	85,521	15,696	129	454,356	(490)	(1,909)	(5,887)	(38)	(8,324)	1.8	
– CRR 1	0.000 to 0.053	35,630	330	—	—	35,960	(6)	(1)	—	—	(7)	—	AA- and above
– CRR 2	0.054 to 0.169	87,465	3,234	—	—	90,699	(28)	(15)	—	—	(43)	—	A+ to A-
– CRR 3	0.170 to 0.740	115,116	17,731	—	—	132,847	(129)	(122)	—	—	(251)	0.2	BBB+ to BBB-
– CRR 4	0.741 to 1.927	74,229	21,550	—	—	95,779	(155)	(210)	—	—	(365)	0.4	BB+ to BB-
– CRR 5	1.928 to 4.914	36,707	21,649	—	—	58,356	(146)	(361)	—	—	(507)	0.9	BB- to B
– CRR 6	4.915 to 8.860	2,513	9,171	—	—	11,684	(16)	(237)	—	—	(253)	2.2	B-
– CRR 7	8.861 to 15.000	1,164	5,476	—	—	6,640	(8)	(337)	—	—	(345)	5.2	CCC+
– CRR 8	15.001 to 99.999	186	6,380	—	—	6,566	(2)	(626)	—	—	(628)	9.6	CCC to C
– CRR 9/10	100.000	—	—	15,696	129	15,825	—	—	(5,887)	(38)	(5,925)	37.4	D
Non-bank financial institutions		61,752	4,718	469	—	66,939	(43)	(77)	(137)	—	(257)	0.4	
– CRR 1	0.000 to 0.053	15,082	421	—	—	15,503	(2)	(1)	—	—	(3)	—	AA- and above
– CRR 2	0.054 to 0.169	16,350	498	—	—	16,848	(3)	(1)	—	—	(4)	—	A+ to A-
– CRR 3	0.170 to 0.740	17,254	1,763	—	—	19,017	(9)	(13)	—	—	(22)	0.1	BBB+ to BBB-
– CRR 4	0.741 to 1.927	7,074	717	—	—	7,791	(19)	(4)	—	—	(23)	0.3	BB+ to BB-
– CRR 5	1.928 to 4.914	5,215	736	—	—	5,951	(10)	(10)	—	—	(20)	0.3	BB- to B
– CRR 6	4.915 to 8.860	716	90	—	—	806	—	(4)	—	—	(4)	0.5	B-
– CRR 7	8.861 to 15.000	46	32	—	—	78	—	(3)	—	—	(3)	3.8	CCC+
– CRR 8	15.001 to 99.999	15	461	—	—	476	—	(41)	—	—	(41)	8.6	CCC to C
– CRR 9/10	100.000	—	—	469	—	469	—	—	(137)	—	(137)	29.2	D
Banks		103,042	1,827	82	—	104,951	(18)	(29)	(22)	—	(69)	0.1	
– CRR 1	0.000 to 0.053	79,188	120	—	—	79,308	(8)	—	—	—	(8)	—	AA- and above
– CRR 2	0.054 to 0.169	13,508	209	—	—	13,717	(2)	—	—	—	(2)	—	A+ to A-
– CRR 3	0.170 to 0.740	4,465	425	—	—	4,890	(3)	—	—	—	(3)	0.1	BBB+ to BBB-
– CRR 4	0.741 to 1.927	2,154	5	—	—	2,159	(1)	—	—	—	(1)	—	BB+ to BB-
– CRR 5	1.928 to 4.914	3,312	172	—	—	3,484	(4)	(1)	—	—	(5)	0.1	BB- to B
– CRR 6	4.915 to 8.860	—	5	—	—	5	—	—	—	—	—	—	B-
– CRR 7	8.861 to 15.000	1	862	—	—	863	—	(27)	—	—	(27)	3.1	CCC+
– CRR 8	15.001 to 99.999	414	29	—	—	443	—	(1)	—	—	(1)	0.2	CCC to C
– CRR 9/10	100.000	—	—	82	—	82	—	—	(22)	—	(22)	26.8	D
At 31 Dec 2022		517,804	92,066	16,247	129	626,246	(551)	(2,015)	(6,046)	(38)	(8,650)	1.4	

Wholesale lending – credit risk profile by obligor grade for loans and advances at amortised cost (continued)

	Basel one-year PD range	Gross carrying amount					Allowance for ECL					ECL coverage	Mapped external rating
		Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total		
	%	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	%	
Corporate and commercial		400,894	98,911	13,460	274	513,539	(665)	(1,874)	(5,601)	(64)	(8,204)	1.6	
– CRR 1	0.000 to 0.053	40,583	599	—	—	41,182	(7)	(1)	—	—	(8)	—	AA- and above
– CRR 2	0.054 to 0.169	78,794	4,843	—	—	83,637	(26)	(43)	—	—	(69)	0.1	A+ to A-
– CRR 3	0.170 to 0.740	139,739	19,199	—	—	158,938	(165)	(145)	—	—	(310)	0.2	BBB+ to BBB-
– CRR 4	0.741 to 1.927	91,268	23,365	—	—	114,633	(218)	(258)	—	—	(476)	0.4	BB+ to BB-
– CRR 5	1.928 to 4.914	45,850	28,375	—	—	74,225	(185)	(424)	—	—	(609)	0.8	BB- to B
– CRR 6	4.915 to 8.860	3,280	11,197	—	—	14,477	(22)	(242)	—	—	(264)	1.8	B-
– CRR 7	8.861 to 15.000	1,101	4,406	—	—	5,507	(24)	(167)	—	—	(191)	3.5	CCC+
– CRR 8	15.001 to 99.999	279	6,927	—	4	7,210	(18)	(594)	—	—	(612)	8.5	CCC to C
– CRR 9/10	100.000	—	—	13,460	270	13,730	—	—	(5,601)	(64)	(5,665)	41.3	D
Non-bank financial institutions		61,086	3,874	395	—	65,355	(44)	(26)	(40)	—	(110)	0.2	
– CRR 1	0.000 to 0.053	14,370	122	—	—	14,492	(2)	(1)	—	—	(3)	—	AA- and above
– CRR 2	0.054 to 0.169	16,438	43	—	—	16,481	(5)	—	—	—	(5)	—	A+ to A-
– CRR 3	0.170 to 0.740	18,282	1,026	—	—	19,308	(11)	(4)	—	—	(15)	0.1	BBB+ to BBB-
– CRR 4	0.741 to 1.927	6,835	1,204	—	—	8,039	(15)	(11)	—	—	(26)	0.3	BB+ to BB-
– CRR 5	1.928 to 4.914	5,053	1,297	—	—	6,350	(11)	(4)	—	—	(15)	0.2	BB- to B
– CRR 6	4.915 to 8.860	102	98	—	—	200	—	(5)	—	—	(5)	2.5	B-
– CRR 7	8.861 to 15.000	5	25	—	—	30	—	(1)	—	—	(1)	3.3	CCC+
– CRR 8	15.001 to 99.999	1	59	—	—	60	—	—	—	—	—	—	CCC to C
– CRR 9/10	100.000	—	—	395	—	395	—	—	(40)	—	(40)	10.1	D
Banks		81,636	1,517	—	—	83,153	(14)	(3)	—	—	(17)	—	
– CRR 1	0.000 to 0.053	61,275	10	—	—	61,285	(4)	—	—	—	(4)	—	AA- and above
– CRR 2	0.054 to 0.169	11,628	65	—	—	11,693	(3)	—	—	—	(3)	—	A+ to A-
– CRR 3	0.170 to 0.740	3,935	102	—	—	4,037	(2)	—	—	—	(2)	—	BBB+ to BBB-
– CRR 4	0.741 to 1.927	4,232	180	—	—	4,412	(5)	—	—	—	(5)	0.1	BB+ to BB-
– CRR 5	1.928 to 4.914	556	52	—	—	608	—	(1)	—	—	(1)	0.2	BB- to B
– CRR 6	4.915 to 8.860	9	541	—	—	550	—	—	—	—	—	—	B-
– CRR 7	8.861 to 15.000	1	564	—	—	565	—	—	—	—	—	—	CCC+
– CRR 8	15.001 to 99.999	—	3	—	—	3	—	(2)	—	—	(2)	66.7	CCC to C
– CRR 9/10	100.000	—	—	—	—	—	—	—	—	—	—	—	D
At 31 Dec 2021		543,616	104,302	13,855	274	662,047	(723)	(1,903)	(5,641)	(64)	(8,331)	1.3	

Commercial real estate

Commercial real estate lending includes the financing of corporate, institutional and high net worth customers who are investing primarily in income-producing assets and, to a lesser extent, in their construction and development. The portfolio is globally diversified with larger concentrations in Hong Kong, the UK, mainland China and the US.

Our global exposure is centred largely on cities with economic, political or cultural significance. In more developed markets, our exposure mainly comprises the financing of investment assets, the redevelopment of existing stock and the augmentation of both commercial and residential markets to support economic and population growth. In less developed commercial real estate markets, our exposures comprise lending for development assets on relatively short tenors with a particular focus on supporting larger, better capitalised developers involved in residential construction or assets supporting economic expansion.

Excluding adverse foreign exchange movements of $3.8bn, commercial real estate lending decreased by $14.9bn, mainly due to the reclassification of assets held for sale of our banking operations in Canada of $7.1bn, compounded by loan repayments in Hong Kong of $6.7bn and France of $0.7bn.

Commercial real estate lending to customers

							of which:	
	Europe	**Asia**	**MENA**	**North America**	**Latin America**	**Total**	***UK***	***Hong Kong***
	$m	**$m**	**$m**	**$m**	**$m**	**$m**	***$m***	***$m***
Gross loans and advances								
Stage 1	**17,318**	**46,757**	**1,115**	**1,534**	**880**	**67,604**	***12,209***	***35,963***
Stage 2	**3,590**	**16,337**	**364**	**798**	**44**	**21,133**	***3,008***	***11,092***
Stage 3	**980**	**3,320**	**286**	**8**	**54**	**4,648**	***827***	***3,029***
POCI	**—**	**19**	**—**	**—**	**—**	**19**	***—***	***19***
At 31 Dec 2022	**21,888**	**66,433**	**1,765**	**2,340**	**978**	**93,404**	***16,044***	***50,103***
– of which: forborne loans	***359***	***763***	***472***	***173***	***47***	***1,814***	**336**	**654**
Allowance for ECL	**(369)**	**(2,095)**	**(159)**	**(12)**	**(31)**	**(2,666)**	***(323)***	***(1,879)***
Gross loans and advances								
Stage 1	20,317	56,734	781	8,328	1,073	87,233	*14,235*	*42,951*
Stage 2	3,505	17,103	569	1,265	218	22,660	*2,781*	*13,300*
Stage 3	1,062	543	206	9	249	2,069	*905*	*435*
POCI	—	98	—	—	—	98	*—*	*98*
At 31 Dec 2021	24,884	74,478	1,556	9,602	1,540	112,060	*17,921*	*56,784*
– of which: forborne loans[1]	*440*	*251*	*145*	*—*	*—*	*836*	436	170
Allowance for ECL	(450)	(693)	(158)	(26)	(130)	(1,457)	*(366)*	*(604)*

1 *Forborne gross loans and advances at 31 December 2021 have not been restated, and agreed with the policies and disclosures presented in the* Annual Report and Accounts 2021.

Refinance risk in commercial real estate

Commercial real estate lending tends to require the repayment of a significant proportion of the principal at maturity. Typically, a customer will arrange repayment through the acquisition of a new loan to settle the existing debt. Refinance risk is the risk that a customer, being unable to repay the debt on maturity, fails to refinance it at commercial terms. We monitor our commercial real estate portfolio closely, assessing indicators for signs of potential issues with refinancing.

Commercial real estate gross loans and advances to customers maturity analysis

							of which:	
	Europe	**Asia**	**MENA**	**North America**	**Latin America**	**Total**	***UK***	***Hong Kong***
	$m	**$m**	**$m**	**$m**	**$m**	**$m**	***$m***	***$m***
On demand, overdrafts or revolving								
< 1 year	**10,996**	**23,492**	**434**	**196**	**299**	**35,417**	***9,211***	***18,698***
1–2 years	**5,197**	**18,052**	**255**	**280**	**117**	**23,901**	***3,678***	***13,917***
2–5 years	**4,031**	**21,818**	**694**	**1,832**	**462**	**28,837**	***2,472***	***14,978***
> 5 years	**1,664**	**3,071**	**382**	**32**	**100**	**5,249**	***683***	***2,510***
At 31 Dec 2022	**21,888**	**66,433**	**1,765**	**2,340**	**978**	**93,404**	***16,044***	***50,103***
On demand, overdrafts or revolving								
< 1 year	12,980	26,736	478	5,961	336	46,491	*10,546*	*20,466*
1–2 years	4,794	18,192	159	1,098	280	24,523	*3,921*	*14,399*
2–5 years	5,352	26,668	631	2,297	559	35,507	*2,805*	*19,562*
> 5 years	1,758	2,882	288	246	365	5,539	*649*	*2,357*
At 31 Dec 2021	24,884	74,478	1,556	9,602	1,540	112,060	*17,921*	*56,784*

The following table presents the Group's exposure to borrowers classified in the commercial real estate sector where the ultimate parent is based in mainland China, as well as all commercial real estate exposures booked on mainland China balance sheets. The exposures at 31 December 2022 are split by country/territory and credit quality including allowances for ECL by stage.

Mainland China commercial real estate

	Hong Kong (audited)[1]	Mainland China (audited)[1]	Rest of the Group (unaudited)[1]	Total (unaudited)[1]
	$m	$m	$m	$m
Loans and advances to customers[2]	9,129	5,752	860	15,741
Guarantees issued and others[3]	249	755	18	1,022
Total mainland China commercial real estate exposure at 31 Dec 2022	9,378	6,507	878	16,763
Distribution of mainland China commercial real estate exposure by credit quality				
– Strong	1,425	2,118	220	3,763
– Good	697	1,087	370	2,154
– Satisfactory	1,269	2,248	77	3,594
– Sub-standard	2,887	779	193	3,859
– Credit impaired	3,100	275	18	3,393
At 31 Dec 2022	9,378	6,507	878	16,763
Allowance for ECL by credit quality				
– Strong	—	(5)	—	(5)
– Good	—	(8)	(1)	(9)
– Satisfactory	(20)	(81)	—	(101)
– Sub-standard	(458)	(42)	(3)	(503)
– Credit impaired	(1,268)	(105)	—	(1,373)
At 31 Dec 2022	(1,746)	(241)	(4)	(1,991)
Allowance for ECL by stage distribution				
– Stage 1	(1)	(9)	(1)	(11)
– Stage 2	(477)	(127)	(3)	(607)
– Stage 3	(1,268)	(105)	—	(1,373)
– POCI	—	—	—	—
At 31 Dec 2022	(1,746)	(241)	(4)	(1,991)
ECL coverage %	18.6	3.7	0.5	11.9

1 *Disclosures in respect of mainland China commercial real estate exposures in Hong Kong and mainland China form part of the scope of the audit of the Group's* Annual Report and Accounts 2022. *Amounts disclosed for mainland China commercial real estate exposures elsewhere in the Group have not been audited but are provided for completeness.*
2 *Amounts represent gross carrying amount.*
3 *Amounts represent nominal amount for guarantees and other contingent liabilities.*

Mainland China commercial real estate

	Hong Kong[1] (audited)[2] $m	Mainland China (audited)[2] $m	Rest of the Group (unaudited)[2] $m	Total (unaudited)[2] $m
Loans and advances to customers[3]	11,484	6,811	410	18,705
Guarantees issued and others[4]	166	2,376	79	2,621
Total mainland China commercial real estate exposure at 31 Dec 2021	11,650	9,187	489	21,326
Distribution of mainland China commercial real estate exposure by credit quality				
– Strong	3,543	3,864	155	7,562
– Good	2,652	2,354	73	5,079
– Satisfactory	3,383	2,855	106	6,344
– Sub-standard	1,570	12	155	1,737
– Credit impaired	502	102	—	604
At 31 Dec 2021	11,650	9,187	489	21,326
Allowance for ECL by credit quality				
– Strong	(15)	(7)	—	(22)
– Good	(37)	(10)	—	(47)
– Satisfactory	(382)	(20)	(2)	(404)
– Sub-standard	(24)	(1)	—	(25)
– Credit impaired	(102)	(11)	—	(113)
At 31 Dec 2021	(560)	(49)	(2)	(611)
Allowance for ECL by stage distribution				
– Stage 1	(2)	(11)	(1)	(14)
– Stage 2	(456)	(27)	(1)	(484)
– Stage 3	(102)	(11)	—	(113)
– POCI	—	—	—	—
At 31 Dec 2021	(560)	(49)	(2)	(611)
ECL coverage %	4.8	0.5	0.4	2.9

1 *Comparatives have been restated to reflect an exposure reclassification from 'guarantees and others' to 'loans and advances to customers', which better reflects the nature of product.*
2 *Disclosures in respect of mainland China commercial real estate exposures in Hong Kong and mainland China form part of the scope of the audit of the Group's* Annual Report and Accounts 2022*. Amounts disclosed for mainland China commercial real estate exposures elsewhere in the Group have not been audited but are provided for completeness.*
3 *Amounts represent gross carrying amount.*
4 *Amounts represent nominal amount for guarantees and other contingent liabilities.*

Commercial real estate financing refers to lending that focuses on commercial development and investment in real estate and covers commercial, residential and industrial assets. Commercial real estate financing can also be provided to a corporate or financial entity for the purchase or financing of a property which supports the overall operations of the business.

The exposures in the table are related to companies whose primary activities are focused on residential, commercial and mixed-use real estate activities. Lending is generally focused on tier 1 and 2 cities.

The exposures in the table above had 57% (31 December 2021: 89%) of exposure booked with a credit quality of 'satisfactory' or above. This deterioration reflects increased funding risks and weaker sales performance for a number of our customers over the period.

Facilities booked in Hong Kong are exposures which represent relatively higher risk within the mainland China commercial real estate portfolio. This portfolio had 36% (31 December 2021: 82%) of exposure booked with a credit quality of 'satisfactory' or above, reflecting sustained credit deterioration in this book over the course of the year. At 31 December 2022, the Group had allowances for ECL of $1.7bn (31 December 2021: $0.6bn) held against mainland China commercial real estate exposures booked in Hong Kong .

Over one third of the unimpaired exposure in the Hong Kong portfolio reflects lending to state owned enterprises, and much of the remaining is to relatively strong privately owned enterprises. This is reflected in the relatively low ECL allowance in this part of the portfolio.

Regulatory and policy developments in the latter part of 2022 appear to have stabilised the sector. Sustained liquidity support and improved domestic residential demand will be necessary to support a recovery.

The Group has additional exposures to mainland China commercial real estate as a result of lending to multinational corporates, which is not incorporated in the table above.

Collateral and other credit enhancements

(Audited)

Although collateral can be an important mitigant of credit risk, it is the Group's practice to lend on the basis of the customer's ability to meet their obligations out of cash flow resources rather than placing primary reliance on collateral and other credit risk enhancements. Depending on the customer's standing and the type of product, facilities may be provided without any collateral or other credit enhancements. For other lending, a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the Group may utilise the collateral as a source of repayment.

Depending on its form, collateral can have a significant financial effect in mitigating our exposure to credit risk. Where there is sufficient collateral, an expected credit loss is not recognised. This is the case for reverse repurchase agreements and for certain loans and advances to customers where the loan to value ('LTV') is very low.

Mitigants may include a charge on borrowers' specific assets, such as real estate or financial instruments. Other credit risk mitigants include short positions in securities and financial assets held as part of linked insurance/investment contracts where the risk is predominantly borne by the policyholder. Additionally, risk may be managed by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees. Guarantees are normally taken from corporates and export credit agencies. Corporates would normally provide guarantees as part of a parent/subsidiary relationship and span a number of credit grades. The export credit agencies will normally be investment grade.

Certain credit mitigants are used strategically in portfolio management activities. While single name concentrations arise in portfolios managed by Global Banking and Corporate Banking, it is only in Global Banking that their size requires the use of portfolio level credit mitigants. Across Global Banking, risk limits and utilisations, maturity profiles and risk quality are monitored and managed proactively. This process is key to the setting of risk appetite for these larger, more complex, geographically distributed customer groups. While the principal form of risk management continues to be at the point of exposure origination, through the lending decision-making process, Global Banking also utilises loan sales and credit default swap ('CDS') hedges to manage concentrations and reduce risk.

These transactions are the responsibility of a dedicated Global Banking portfolio management team. Hedging activity is carried out within agreed credit parameters, and is subject to market risk limits and a robust governance structure. Where applicable, CDSs are entered into directly with a central clearing house counterparty. Otherwise, the Group's exposure to CDS protection providers is diversified among mainly banking counterparties with strong credit ratings.

CDS mitigants are held at portfolio level and are not included in the expected credit loss calculations. CDS mitigants are not reported in the following tables.

Collateral on loans and advances

Collateral held is analysed separately for commercial real estate and for other corporate, commercial and financial (non-bank) lending. The following tables include off-balance sheet loan commitments, primarily undrawn credit lines.

The collateral measured in the following tables consists of fixed first charges on real estate, and charges over cash and marketable financial instruments. The values in the tables represent the expected market value on an open market basis. No adjustment has been made to the collateral for any expected costs of recovery. Marketable securities are measured at their fair value.

Other types of collateral such as unsupported guarantees and floating charges over the assets of a customer's business are not measured in the following tables. While such mitigants have value, often providing rights in insolvency, their assignable value is not sufficiently certain and they are therefore assigned no value for disclosure purposes.

The LTV ratios presented are calculated by directly associating loans and advances with the collateral that individually and uniquely supports each facility. When collateral assets are shared by multiple loans and advances, whether specifically or, more generally, by way of an all monies charge, the collateral value is pro-rated across the loans and advances protected by the collateral.

For credit-impaired loans, the collateral values cannot be directly compared with impairment allowances recognised. The LTV figures use open market values with no adjustments. Impairment allowances are calculated on a different basis, by considering other cash flows and adjusting collateral values for costs of realising collateral as explained further on page 342.

Commercial real estate loans and advances

The value of commercial real estate collateral is determined by using a combination of external and internal valuations and physical inspections. For commercial real estate, where the facility exceeds regulatory threshold requirements, Group policy requires an independent review of the valuation at least every three years, or more frequently as the need arises.

In Hong Kong, market practice is typically for lending to major property companies to be either secured by guarantees or unsecured. In Europe, facilities of a working capital nature are generally not secured by a first fixed charge, and are therefore disclosed as not collateralised.

Wholesale lending – commercial real estate loans and advances to customers including loan commitments by level of collateral for key countries/territories (by stage)

(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Stage 1						
Not collateralised	44,052	0.1	5,960	0.3	20,286	—
Fully collateralised	53,475	0.1	10,293	0.1	27,926	—
LTV ratio:						
– less than 50%	29,486	0.1	2,900	0.2	21,185	—
– 51% to 75%	18,530	0.1	6,361	0.1	5,365	0.1
– 76% to 90%	2,941	0.1	556	0.2	995	—
– 91% to 100%	2,518	0.2	476	0.2	381	—
Partially collateralised (A):	4,923	0.1	1,920	0.2	804	—
– *collateral value on A*	2,800		1,113		584	
Total	102,450	0.1	18,173	0.2	49,016	—
Stage 2						
Not collateralised	9,804	5.7	2,511	1.5	4,673	10.5
Fully collateralised	15,423	1.6	2,025	0.9	7,457	1.1
LTV ratio:						
– less than 50%	5,945	1.6	664	0.9	3,539	1.4
– 51% to 75%	6,821	1.1	1,197	0.9	3,536	1.0
– 76% to 90%	908	2.1	140	1.4	134	0.1
– 91% to 100%	1,749	3.6	24	0.4	248	0.2
Partially collateralised (B):	1,624	1.6	179	1.1	390	2.8
– *collateral value on B*	997		144		249	
Total	26,851	3.1	4,715	1.3	12,520	4.7
Stage 3						
Not collateralised	2,612	53.7	295	35.3	2,123	56.9
Fully collateralised	1,617	10.8	372	6.5	864	5.2
LTV ratio:						
– less than 50%	544	16.5	53	3.8	318	2.2
– 51% to 75%	594	4.4	291	2.1	205	3.4
– 76% to 90%	315	4.1	11	18.2	264	1.9
– 91% to 100%	164	28.7	17	76.5	77	32.5
Partially collateralised (C):	513	54.2	176	68.8	73	61.6
– *collateral value on C*	293		72		39	
Total	4,742	39.1	843	29.5	3,060	42.5
POCI						
Not collateralised	—	—	—	—	—	—
Fully collateralised	—	—	—	—	—	—
LTV ratio:						
– less than 50%	—	—	—	—	—	—
– 51% to 75%	—	—	—	—	—	—
– 76% to 90%	—	—	—	—	—	—
– 91% to 100%	—	—	—	—	—	—
Partially collateralised (D):	19	—	—	—	19	—
– *collateral value on D*	8		—		8	
Total	19	—	—	—	19	—
At 31 Dec 2022	134,062	2.1	23,731	1.4	64,615	2.9

Wholesale lending – commercial real estate loans and advances to customers including loan commitments by level of collateral for key countries/territories (by stage) (continued)

(Audited)

	Total		Of which: UK		Of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Stage 1						
Not collateralised	50,603	0.1	7,623	0.4	23,864	—
Fully collateralised	71,769	0.1	13,139	0.2	32,951	—
LTV ratio:						
– less than 50%	35,984	0.1	4,142	0.2	22,645	—
– 51% to 75%	26,390	0.1	6,460	0.2	8,082	—
– 76% to 90%	5,284	0.2	1,859	0.2	1,181	—
– 91% to 100%	4,111	0.1	678	—	1,043	0.1
Partially collateralised (A):	5,429	0.1	2,018	0.1	714	—
– *collateral value on A*	2,942		874		447	
Total	127,801	0.1	22,780	0.3	57,529	—
Stage 2						
Not collateralised	11,729	4.3	1,970	0.9	7,758	5.9
Fully collateralised	12,741	1.1	1,131	2.3	6,385	0.4
LTV ratio:						
– less than 50%	5,759	1.0	605	3.1	3,633	0.3
– 51% to 75%	4,804	1.1	471	1.3	2,389	0.5
– 76% to 90%	757	1.5	43	—	269	0.4
– 91% to 100%	1,421	1.5	12	—	94	—
Partially collateralised (B):	1,783	2.7	366	0.3	172	2.9
– *collateral value on B*	930		223		70	
Total	26,253	2.7	3,467	1.3	14,315	3.4
Stage 3						
Not collateralised	828	40.9	407	42.0	198	35.9
Fully collateralised	1,176	22.0	346	5.2	290	11.0
LTV ratio:						
– less than 50%	645	19.8	36	2.8	284	10.9
– 51% to 75%	286	9.1	250	5.2	—	—
– 76% to 90%	62	14.5	11	—	2	—
– 91% to 100%	183	52.5	49	8.2	4	25.0
Partially collateralised (C):	265	47.9	204	49.0	—	—
– *collateral value on C*	149		97		—	
Total	2,269	32.0	957	30.2	488	21.1
POCI						
Not collateralised	—	—	—	—	—	—
Fully collateralised	98	—	—	—	98	—
LTV ratio:						
– less than 50%	98	—	—	—	98	—
– 51% to 75%	—	—	—	—	—	—
– 76% to 90%	—	—	—	—	—	—
– 91% to 100%	—	—	—	—	—	—
Partially collateralised (D):	—	—	—	—	—	—
– *collateral value on D*	—		—		—	
Total	98	—	—	—	98	—
At 31 Dec 2021	156,421	1.0	27,204	1.5	72,430	0.8

Wholesale lending – commercial real estate loans and advances including loan commitments by level of collateral for key countries/territories

(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Rated CRR/PD1 to 7						
Not collateralised	**52,373**	**0.6**	***8,457***	***0.7***	***23,861***	***0.9***
Fully collateralised	**68,020**	**0.3**	***12,309***	***0.3***	***34,779***	***0.1***
Partially collateralised (A):	**6,479**	**0.4**	***2,098***	***0.2***	***1,194***	***0.9***
– *collateral value on A*	***3,754***		**1,257**		**833**	
Total	**126,872**	**0.4**	***22,864***	***0.4***	***59,834***	***0.5***
Rated CRR/PD8						
Not collateralised	**1,483**	**19.8**	***14***	***3.6***	***1,098***	***26.0***
Fully collateralised	**878**	**9.2**	***9***	***11.1***	***604***	***7.1***
LTV ratio:						
– less than 50%	**236**	**21.6**	***4***	***7.5***	***167***	***15.0***
– 51% to 75%	**594**	**5.1**	***3***	***13.3***	***393***	***4.6***
– 76% to 90%	**45**	**0.4**	***—***	***—***	***44***	***0.2***
– 91% to 100%	**3**	**3.3**	***2***	***3.5***	***—***	***—***
Partially collateralised (B):	**68**	**2.9**	***1***	***8.0***	***—***	***—***
– *collateral value on B*	***43***		***—***		***—***	
Total	**2,429**	**15.5**	***24***	***6.6***	***1,702***	***19.3***
Rated CRR/PD9 to 10						
Not collateralised	**2,612**	**53.7**	***295***	***35.3***	***2,123***	***56.9***
Fully collateralised	**1,617**	**10.8**	***372***	***6.5***	***864***	***5.2***
LTV ratio:						
– less than 50%	**544**	**16.5**	***53***	***3.8***	***318***	***2.2***
– 51% to 75%	**594**	**4.4**	***291***	***2.1***	***205***	***3.4***
– 76% to 90%	**315**	**4.1**	***11***	***18.2***	***264***	***1.9***
– 91% to 100%	**164**	**28.7**	***17***	***76.5***	***77***	***32.5***
Partially collateralised (C):	**532**	**52.3**	***176***	***68.8***	***92***	***48.9***
– *collateral value on C*	***301***		**72**		**47**	
Total	**4,761**	**39.0**	***843***	***29.5***	***3,079***	***42.2***
At 31 Dec 2022	**134,062**	**2.1**	***23,731***	***1.4***	***64,615***	***2.9***
Rated CRR/PD1 to 7						
Not collateralised	61,279	0.5	*9,586*	*0.5*	*30,917*	*0.6*
Fully collateralised	83,456	0.2	*14,218*	*0.2*	*38,817*	*0.1*
Partially collateralised (A):	7,059	0.5	*2,379*	*0.2*	*886*	*0.6*
– *collateral value on A*	*3,729*		1,092		517	
Total	151,794	0.3	*26,183*	*0.3*	*70,620*	*0.3*
Rated CRR/PD8						
Not collateralised	1,053	26.5	*7*	*42.9*	*705*	*38.6*
Fully collateralised	1,054	3.8	*52*	*38.5*	*519*	*2.1*
LTV ratio:						
– less than 50%	503	4.8	*41*	*41.5*	*378*	*0.8*
– 51% to 75%	447	3.1	*8*	*25.0*	*137*	*5.8*
– 76% to 90%	60	1.7	*1*	*—*	*4*	*—*
– 91% to 100%	44	2.3	*2*	*—*	*—*	*—*
Partially collateralised (B):	153	15.0	*5*	*20.0*	*—*	*—*
– *collateral value on B*	*143*		5		*—*	
Total	2,260	15.1	*64*	*37.5*	*1,224*	*23.1*
Rated CRR/PD9 to 10						
Not collateralised	828	40.9	*407*	*42.0*	*198*	*35.9*
Fully collateralised	1,274	20.3	*346*	*5.2*	*388*	*8.2*
LTV ratio:						
– less than 50%	743	17.2	*36*	*2.8*	*382*	*8.1*
– 51% to 75%	286	9.1	*250*	*5.2*	*—*	*—*
– 76% to 90%	62	14.5	*11*	*—*	*2*	*—*
– 91% to 100%	183	52.5	*49*	*8.2*	*4*	*25.0*
Partially collateralised (C):	265	47.9	*204*	*49.0*	*—*	*—*
– *collateral value on C*	*149*		97		*—*	
Total	2,367	30.6	*957*	*30.2*	*586*	*17.6*
At 31 Dec 2021	156,421	1.0	*27,204*	*1.5*	*72,430*	*0.8*

Other corporate, commercial and financial (non-bank) loans and advances

Other corporate, commercial and financial (non-bank) loans are analysed separately in the following table, which focuses on the countries/territories containing the majority of our loans and advances balances. For financing activities in other corporate and commercial lending, collateral value is not strongly correlated to principal repayment performance.

Collateral values are generally refreshed when an obligor's general credit performance deteriorates and we have to assess the likely performance of secondary sources of repayment should it prove necessary to rely on them.

Accordingly, the following table reports values only for customers with CRR 8–10, recognising that these loans and advances generally have valuations that are comparatively recent.

Wholesale lending – other corporate, commercial and financial (non-bank) loans and advances including loan commitments by level of collateral for key countries/territories (by stage)

(Audited)

	Total		*of which:* UK		*of which:* Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	*Gross carrying/ nominal amount*	*ECL coverage*	*Gross carrying/ nominal amount*	*ECL coverage*
	$m	%	*$m*	*%*	*$m*	*%*
Stage 1						
Not collateralised	632,847	0.1	*105,126*	*0.1*	*109,919*	*—*
Fully collateralised	96,434	0.1	*21,192*	*0.1*	*39,165*	*0.1*
LTV ratio:						
– less than 50%	36,896	0.1	*6,928*	*0.1*	*15,695*	*0.1*
– 51% to 75%	29,242	0.1	*7,611*	*0.1*	*13,893*	*0.1*
– 76% to 90%	9,922	0.1	*1,889*	*0.1*	*4,964*	*0.1*
– 91% to 100%	20,374	0.1	*4,764*	*—*	*4,613*	*0.1*
Partially collateralised (A):	54,836	0.1	*6,480*	*0.1*	*17,704*	*0.1*
– *collateral value on A*	*27,779*		3,470		7,737	
Total	784,117	0.1	*132,798*	*0.1*	*166,788*	*0.1*
Stage 2						
Not collateralised	79,013	1.0	*16,886*	*2.2*	*9,906*	*0.7*
Fully collateralised	29,618	1.2	*6,511*	*1.3*	*12,693*	*1.0*
LTV ratio:						
– less than 50%	11,221	1.3	*2,872*	*1.0*	*4,577*	*0.9*
– 51% to 75%	11,948	1.4	*2,656*	*1.5*	*5,413*	*1.2*
– 76% to 90%	2,990	1.0	*578*	*1.9*	*1,479*	*0.7*
– 91% to 100%	3,459	0.8	*405*	*1.2*	*1,224*	*0.3*
Partially collateralised (B):	13,130	1.0	*2,288*	*1.2*	*3,379*	*0.6*
– *collateral value on B*	*6,484*		1,197		1,524	
Total	121,761	1.1	*25,685*	*1.9*	*25,978*	*0.8*
Stage 3						
Not collateralised	8,278	38.4	*3,783*	*17.8*	*939*	*56.0*
Fully collateralised	1,948	13.7	*699*	*4.6*	*665*	*3.8*
LTV ratio:						
– less than 50%	678	18.7	*175*	*3.4*	*175*	*1.7*
– 51% to 75%	503	11.3	*336*	*6.5*	*115*	*7.8*
– 76% to 90%	402	4.7	*102*	*1.0*	*268*	*0.4*
– 91% to 100%	365	17.5	*86*	*3.5*	*107*	*10.3*
Partially collateralised (C):	2,120	37.3	*308*	*25.6*	*777*	*30.9*
– *collateral value on C*	*1,133*		158		397	
Total	12,346	34.3	*4,790*	*16.4*	*2,381*	*33.2*
POCI						
Not collateralised	64	18.8	*28*	*3.6*	*—*	*—*
Fully collateralised	24	91.7	*—*	*—*	*24*	*91.7*
LTV ratio:						
– less than 50%	—	—	*—*	*—*	*—*	*—*
– 51% to 75%	1	—	*—*	*—*	*1*	*—*
– 76% to 90%	23	95.7	*—*	*—*	*23*	*95.7*
– 91% to 100%	—	—	*—*	*—*	*—*	*—*
Partially collateralised (D):	22	18.2	*—*	*—*	*14*	*—*
– *collateral value on D*	*16*		*—*		13	
Total	110	34.5	*28*	*3.6*	*38*	*57.9*
At 31 Dec 2022	918,334	0.7	*163,301*	*0.9*	*195,185*	*0.6*

Wholesale lending – other corporate, commercial and financial (non-bank) loans and advances including loan commitments by level of collateral for key countries/territories (by stage) (continued)

(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Stage 1						
Not collateralised	624,935	0.1	112,188	0.2	111,948	—
Fully collateralised	112,905	0.1	22,971	0.2	45,479	0.1
LTV ratio:						
– less than 50%	40,636	0.1	6,512	0.2	16,915	—
– 51% to 75%	38,709	0.1	9,431	0.2	16,533	0.1
– 76% to 90%	13,284	0.1	2,556	0.1	4,920	0.1
– 91% to 100%	20,276	0.1	4,472	—	7,111	0.1
Partially collateralised (A):	64,058	0.1	8,665	0.1	20,358	—
– *collateral value on A*	30,890		4,826		9,322	
Total	801,898	0.1	143,824	0.2	177,785	—
Stage 2						
Not collateralised	85,394	1.1	18,562	2.0	8,310	1.1
Fully collateralised	32,019	1.1	8,231	1.3	11,503	0.7
LTV ratio:						
– less than 50%	10,892	1.2	3,148	1.5	3,378	0.5
– 51% to 75%	14,281	1.1	4,161	1.2	5,202	0.9
– 76% to 90%	2,752	1.2	687	1.5	1,148	0.9
– 91% to 100%	4,094	0.9	235	1.7	1,775	0.2
Partially collateralised (B):	12,484	1.0	1,824	1.9	1,788	0.4
– *collateral value on B*	6,675		937		785	
Total	129,897	1.1	28,617	1.8	21,601	0.8
Stage 3						
Not collateralised	8,122	47.3	2,979	21.6	732	74.7
Fully collateralised	2,278	12.7	1,212	3.4	240	2.1
LTV ratio:						
– less than 50%	603	20.9	249	4.8	76	—
– 51% to 75%	1,110	5.0	786	1.4	110	3.6
– 76% to 90%	295	11.5	115	9.6	26	—
– 91% to 100%	270	27.4	62	9.7	28	3.6
Partially collateralised (C):	2,134	38.7	318	35.5	616	28.9
– *collateral value on C*	1,200		186		358	
Total	12,534	39.6	4,509	17.7	1,588	46.0
POCI						
Not collateralised	114	36.0	28	21.4	4	—
Fully collateralised	61	34.4	—	—	57	36.8
LTV ratio:						
– less than 50%	—	—	—	—	—	—
– 51% to 75%	57	36.8	—	—	57	36.8
– 76% to 90%	—	—	—	—	—	—
– 91% to 100%	4	—	—	—	—	—
Partially collateralised (D):	2	100.0	—	—	—	—
– *collateral value on D*	2		—		—	
Total	177	36.2	28	21.4	61	34.4
At 31 Dec 2021	944,506	0.8	176,978	0.9	201,035	0.5

Wholesale lending – other corporate, commercial and financial (non-bank) loans and advances including loan commitments by level of collateral for key countries/territories

(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Rated CRR/PD8						
Not collateralised	**4,209**	**3.5**	***1,071***	***1.6***	***62***	***38.7***
Fully collateralised	**2,208**	**3.8**	***303***	***3.3***	***171***	***12.3***
LTV ratio:						
– less than 50%	**1,104**	**4.3**	***184***	***0.5***	***84***	***14.3***
– 51% to 75%	**933**	**3.5**	***95***	***5.3***	***84***	***10.7***
– 76% to 90%	**44**	**6.8**	***22***	***13.6***	***—***	***—***
– 91% to 100%	**127**	**0.8**	***2***	***10.0***	***3***	***6.7***
Partially collateralised (A):	**1,298**	**2.9**	***24***	***4.2***	***9***	***11.1***
– *collateral value on A*	***1,212***		**4**		**5**	
Total	**7,715**	**3.5**	***1,398***	***2.0***	***242***	***19.0***
Rated CRR/PD9 to 10						
Not collateralised	**8,342**	**38.2**	***3,810***	***17.7***	***939***	***56.0***
Fully collateralised	**1,971**	**14.6**	***699***	***4.6***	***688***	***6.7***
LTV ratio:						
– less than 50%	**677**	**18.8**	***175***	***3.4***	***175***	***1.7***
– 51% to 75%	**504**	**11.3**	***336***	***6.5***	***116***	***7.8***
– 76% to 90%	**425**	**9.6**	***102***	***1.0***	***290***	***7.9***
– 91% to 100%	**365**	**17.5**	***86***	***3.5***	***107***	***10.3***
Partially collateralised (B):	**2,143**	**37.1**	***309***	***25.6***	***792***	***30.3***
– *collateral value on B*	***1,149***		**158**		**410**	
Total	**12,456**	**34.3**	***4,818***	***16.3***	***2,419***	***33.6***
At 31 Dec 2022	**20,171**	**22.5**	***6,216***	***13.1***	***2,661***	***32.2***
Rated CRR/PD8						
Not collateralised	4,790	3.9	*1,587*	*3.1*	*79*	*30.4*
Fully collateralised	1,653	3.9	*259*	*6.6*	*32*	*—*
LTV ratio:						
– less than 50%	803	3.5	*113*	*6.2*	*2*	*—*
– 51% to 75%	583	3.8	*110*	*8.2*	*1*	*—*
– 76% to 90%	116	5.2	*23*	*4.3*	*29*	*—*
– 91% to 100%	151	5.3	*13*	*—*	*—*	*—*
Partially collateralised (A):	1,253	3.7	*138*	*8.0*	*11*	*—*
– *collateral value on A*	*921*		40		6	
Total	7,696	3.9	*1,984*	*3.9*	*122*	*20.5*
Rated CRR/PD9 to 10						
Not collateralised	8,239	47.1	*3,007*	*21.5*	*736*	*74.3*
Fully collateralised	2,335	13.3	*1,212*	*3.4*	*297*	*9.1*
LTV ratio:						
– less than 50%	604	20.9	*249*	*4.8*	*75*	*—*
– 51% to 75%	1,166	6.7	*786*	*1.4*	*168*	*14.9*
– 76% to 90%	295	11.5	*115*	*9.6*	*26*	*—*
– 91% to 100%	270	27.4	*62*	*9.7*	*28*	*3.6*
Partially collateralised (B):	2,137	38.7	*318*	*35.5*	*616*	*28.9*
– *collateral value on B*	*1,203*		186		358	
Total	12,711	39.5	*4,537*	*17.7*	*1,649*	*45.6*
At 31 Dec 2021	20,407	26.1	*6,521*	*13.5*	*1,771*	*43.8*

Other credit risk exposures

In addition to collateralised lending, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are summarised below:

- Some securities issued by governments, banks and other financial institutions benefit from additional credit enhancements provided by government guarantees that cover the assets.
- Debt securities issued by banks and financial institutions include asset-backed securities ('ABSs') and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABSs is reduced through the purchase of credit default swap ('CDS') protection.
- Trading loans and advances mainly pledged against cash collateral are posted to satisfy margin requirements. There is limited credit risk on cash collateral posted since in the event of default of the counterparty this would be set off against the related liability. Reverse repos and stock borrowing are by their nature collateralised.

Collateral accepted as security that the Group is permitted to sell or repledge under these arrangements is described on page 378 of the financial statements.

- The Group's maximum exposure to credit risk includes financial guarantees and similar contracts granted, as well as loan and other credit-related commitments. Depending on the terms of the arrangement, we may use additional credit mitigation if a guarantee is called upon or a loan commitment is drawn and subsequently defaults.

For further information on these arrangements, see Note 33 on the financial statements.

Derivatives

We participate in transactions exposing us to counterparty credit risk. Counterparty credit risk is the risk of financial loss if the counterparty to a transaction defaults before satisfactorily settling it. It arises principally from over-the-counter ('OTC') derivatives and securities financing transactions and is calculated in both the trading and non-trading books. Transactions vary in value by reference to a market factor such as an interest rate, exchange rate or asset price.

The counterparty risk from derivative transactions is taken into account when reporting the fair value of derivative positions. The adjustment to the fair value is known as the credit valuation adjustment ('CVA').

For an analysis of CVAs, see Note 12 on the financial statements.

The following table reflects by risk type the fair values and gross notional contract amounts of derivatives cleared through an exchange, central counterparty or non-central counterparty.

Notional contract amounts and fair values of derivatives

	2022			2021		
	Notional amount	**Fair value**		Notional amount	Fair value	
		Assets	**Liabilities**		Assets	Liabilities
	$m	**$m**	**$m**	$m	$m	$m
Total OTC derivatives	**23,649,591**	**421,309**	**423,911**	21,964,665	246,108	241,136
– total OTC derivatives cleared by central counterparties	**11,360,729**	**149,190**	**154,167**	10,086,344	59,147	60,686
– total OTC derivatives not cleared by central counterparties	**12,288,862**	**272,119**	**269,744**	11,878,321	186,961	180,450
Total exchange traded derivatives	**1,146,426**	**3,824**	**2,840**	1,359,692	4,152	3,306
Gross	**24,796,017**	**425,133**	**426,751**	23,324,357	250,260	244,442
Offset		**(140,987)**	**(140,987)**		(53,378)	(53,378)
At 31 Dec		**284,146**	**285,764**		196,882	191,064

The purposes for which HSBC uses derivatives are described in Note 15 on the financial statements.

The International Swaps and Derivatives Association ('ISDA') master agreement is our preferred agreement for documenting derivatives activity. It is common, and our preferred practice, for the parties involved in a derivative transaction to execute a credit support annex ('CSA') in conjunction with the ISDA master agreement. Under a CSA, collateral is passed between the parties to mitigate the counterparty risk inherent in outstanding positions. The majority of our CSAs are with financial institutional clients.

We manage the counterparty exposure on our OTC derivative contracts by using collateral agreements with counterparties and netting agreements. Currently, we do not actively manage our general OTC derivative counterparty exposure in the credit markets, although we may manage individual exposures in certain circumstances.

We place strict policy restrictions on collateral types and as a consequence the types of collateral received and pledged are, by value, highly liquid and of a strong quality, being predominantly cash.

Where a collateral type is required to be approved outside the collateral policy, approval is required from a committee of senior representatives from Markets, Legal and Risk.

See Note 31 on the financial statements for details regarding legally enforceable right of offset in the event of counterparty default and collateral received in respect of derivatives.

Personal lending

This section presents further disclosures related to personal lending. It provides details of the regions, countries and products that are driving the change observed in personal loans and advances to customers, with the impact of foreign exchange separately identified. Additionally, Hong Kong and UK mortgage book LTV data is provided.

This section also provides a reconciliation of the opening 1 January 2022 to 31 December 2022 closing gross carrying/nominal amounts and associated allowance for ECL. Further product granularity is also provided by stage, with geographical data presented for loans and advances to customers, loan and other credit-related commitments and financial guarantees.

At 31 December 2022, total personal lending for loans and advances to customers of $415bn decreased by $63.3bn compared with 31 December 2021. This decrease included adverse foreign exchange movements of $27.3bn. Excluding foreign exchange movements, there was a decrease of $36bn. This decrease was due to the reclassification to assets held for sale of our banking business in Canada of $26.1bn and our retail banking operations in France of $23.7bn.

The reduction was partly mitigated by growth of $8.7bn in the UK, $2.8bn in Asia and $2.0bn in Latin America.

The allowance for ECL attributable to personal lending, excluding off-balance sheet loan commitments and guarantees, decreased by $0.2bn to $2.9bn at 31 December 2022. This included favourable foreign exchange movements of $0.1bn.

Excluding foreign exchange movements and reclassifications to held for sale, mortgage lending balances increased by $15.4bn to $336.8bn at 31 December 2022. The majority of the growth was in the UK by $8.9bn; Asia by $4.4bn, notably $3.4bn in Hong Kong and $1.6bn in Australia; and in Latin America by $1.0bn. The allowance for ECL, excluding foreign exchange, attributable to mortgages of $0.6bn decreased by $0.1bn compared with 31 December 2021.

At 31 December 2022, for certain retail lending portfolios, we introduced enhancements in the significant increase in credit risk ('SICR') approach in relation to capturing relative movements in probability of default ('PD'). The enhanced approach captured relative movements in PD since origination, which resulted in a significant migration to stage 2 from loans to customers gross carrying amounts in stage 1.

The volume of stage 1 customer accounts with lower absolute levels of credit risk who have exhibited some amount of relative increase in PD since origination have migrated into stage 2, and accounts originated with higher absolute levels of credit risk with no or insignificant increases in PD since origination have been transferred to stage 1, with no material overall change in risk.

The impact on ECL is immaterial due to the offsetting ECL impacts of stage migrations and due to the LTV profiles. This is particularly applicable to UK customers.

The enhancement of the SICR approach constitutes an improvement towards more responsive models that better reflect the SICR since origination. This includes consideration of the current cost of living pressures, as markets adjust to the higher interest-rate environment.

The quality of both our Hong Kong and UK mortgage books remained strong, with low levels of impairment allowances. The average LTV ratio on new mortgage lending in Hong Kong was 59%, compared with an estimated 57% for the overall mortgage portfolio. The average LTV ratio on new lending in the UK was 67%, compared with an estimated 50% for the overall mortgage portfolio.

Excluding foreign exchange movements and reclassifications to held for sale, other personal lending balances at 31 December 2022 decreased by $1.4bn compared with 31 December 2021. This was mainly from a decline of $2.0bn from Hong Kong in secured personal lending, partly offset by an increase of $0.5bn from Latin America in credit cards.

The allowance for ECL, excluding foreign exchange, attributable to other personal lending of $2.3bn remained unchanged from 31 December 2021. Excluding foreign exchange, the allowance for ECL attributable to credit cards increased by $0.1bn, offset by a decrease of $0.1bn in unsecured personal lending.

Total personal lending for loans and advances to customers at amortised cost by stage distribution

	Gross carrying amount				Allowance for ECL			
	Stage 1 $m	Stage 2 $m	Stage 3 $m	Total $m	Stage 1 $m	Stage 2 $m	Stage 3 $m	Total $m
By portfolio								
First lien residential mortgages	294,918	39,860	2,043	336,821	(74)	(230)	(270)	(574)
– of which: interest only (including offset)	*19,636*	*4,485*	*169*	*24,290*	*(3)*	*(46)*	*(41)*	*(90)*
– affordability (including US adjustable rate mortgages)	*14,773*	*369*	*240*	*15,382*	*(5)*	*(3)*	*(4)*	*(12)*
Other personal lending	67,863	9,031	1,297	78,191	(488)	(1,275)	(535)	(2,298)
– second lien residential mortgages	353	20	6	379	(1)	(2)	(3)	(6)
– guaranteed loans in respect of residential property	1,121	121	125	1,367	(1)	(3)	(30)	(34)
– other personal lending which is secured	31,306	594	206	32,106	(15)	(10)	(30)	(55)
– credit cards	16,705	4,423	260	21,388	(225)	(777)	(160)	(1,162)
– other personal lending which is unsecured	16,617	3,706	687	21,010	(235)	(470)	(305)	(1,010)
– motor vehicle finance	1,761	167	13	1,941	(11)	(13)	(7)	(31)
At 31 Dec 2022	362,781	48,891	3,340	415,012	(562)	(1,505)	(805)	(2,872)
By geography								
Europe	143,438	38,186	1,269	182,893	(151)	(706)	(282)	(1,139)
– of which: UK	*132,312*	*37,974*	*1,027*	*171,313*	*(137)*	*(696)*	*(230)*	*(1,063)*
Asia	185,828	8,723	1,117	195,668	(139)	(363)	(188)	(690)
– of which: Hong Kong	*128,218*	*4,563*	*236*	*133,017*	*(59)*	*(255)*	*(39)*	*(353)*
MENA	5,347	237	132	5,716	(33)	(42)	(70)	(145)
North America	17,772	562	439	18,773	(15)	(44)	(67)	(126)
Latin America	10,396	1,183	383	11,962	(224)	(350)	(198)	(772)
At 31 Dec 2022	362,781	48,891	3,340	415,012	(562)	(1,505)	(805)	(2,872)

At 31 December 2022, the stage 2 personal lending balances in the UK of $38.0bn increased by $33.3bn compared with 31 December 2021. This increase was largely due to the enhancement in the SICR approach in relation to capturing relative movements in PD since origination, and also, to a lesser extent, it considered cost of living pressures. The impact on ECL was immaterial due to the offsetting ECL impacts of stage migrations due to the low LTV profiles applicable to these UK customers.

Total personal lending for loans and other credit-related commitments and financial guarantees by stage distribution

	Nominal amount				Allowance for ECL			
	Stage 1 $m	Stage 2 $m	Stage 3 $m	Total $m	Stage 1 $m	Stage 2 $m	Stage 3 $m	Total $m
Europe	53,299	592	114	54,005	(11)	(1)	—	(12)
– of which: UK	*51,589*	*454*	*107*	*52,150*	*(11)*	*(1)*	*—*	*(12)*
Asia	170,103	2,914	633	173,650	(2)	—	—	(2)
– of which: Hong Kong	*128,990*	*2,176*	*624*	*131,790*	*(2)*	*—*	*—*	*(2)*
MENA	2,328	20	2	2,350	(1)	—	—	(1)
North America	10,418	140	48	10,606	(1)	—	—	(1)
Latin America	4,496	31	3	4,530	(11)	—	—	(11)
At 31 Dec 2022	240,644	3,697	800	245,141	(26)	(1)	—	(27)

Total personal lending for loans and advances to customers at amortised cost by stage distribution (continued)

	Gross carrying amount				Allowance for ECL			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
	$m	$m	$m	$m	$m	$m	$m	$m
By portfolio								
First lien residential mortgages	360,686	7,637	3,045	371,368	(128)	(131)	(416)	(675)
– of which: interest only (including offset)	*28,506*	*1,795*	*255*	*30,556*	*(5)*	*(24)*	*(81)*	*(110)*
– affordability (including US adjustable rate mortgages)	*13,621*	*712*	*452*	*14,785*	*(6)*	*(6)*	*(5)*	*(17)*
Other personal lending	96,270	8,802	1,897	106,969	(530)	(1,088)	(810)	(2,428)
– second lien residential mortgages	314	44	37	395	(1)	(4)	(9)	(14)
– guaranteed loans in respect of residential property	20,643	731	236	21,610	(9)	(7)	(42)	(58)
– other personal lending which is secured	36,533	1,096	366	37,995	(21)	(15)	(120)	(156)
– credit cards	18,623	3,897	338	22,858	(246)	(675)	(214)	(1,135)
– other personal lending which is unsecured	18,743	2,820	915	22,478	(240)	(378)	(421)	(1,039)
– motor vehicle finance	1,414	214	5	1,633	(13)	(9)	(4)	(26)
At 31 Dec 2021	456,956	16,439	4,942	478,337	(658)	(1,219)	(1,226)	(3,103)
By geography								
Europe	212,284	5,639	2,148	220,071	(199)	(499)	(637)	(1,335)
– of which: UK	*176,547*	*4,668*	*1,488*	*182,703*	*(167)*	*(480)*	*(399)*	*(1,046)*
Asia	187,391	7,796	1,303	196,490	(158)	(381)	(226)	(765)
– of which: Hong Kong	*125,854*	*4,959*	*202*	*131,015*	*(65)*	*(231)*	*(43)*	*(339)*
MENA	4,965	252	202	5,419	(38)	(40)	(94)	(172)
North America	43,489	2,126	1,005	46,620	(43)	(67)	(118)	(228)
Latin America	8,827	626	284	9,737	(220)	(232)	(151)	(603)
At 31 Dec 2021	456,956	16,439	4,942	478,337	(658)	(1,219)	(1,226)	(3,103)

Total personal lending for loans and other credit-related commitments and financial guarantees by stage distribution (continued)

	Nominal amount				Allowance for ECL			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Europe	57,109	558	107	57,774	(11)	(1)	—	(12)
– of which: UK	*54,704*	*407*	*104*	*55,215*	*(10)*	*(1)*	*—*	*(11)*
Asia	160,248	894	21	161,163	—	—	—	—
– of which: Hong Kong	*121,597*	*292*	*19*	*121,908*	*—*	*—*	*—*	*—*
MENA	2,568	30	16	2,614	(5)	—	—	(5)
North America	15,039	251	23	15,313	(15)	(1)	—	(16)
Latin America	3,920	29	2	3,951	(6)	—	—	(6)
At 31 Dec 2021	238,884	1,762	169	240,815	(37)	(2)	—	(39)

Exposure to UK interest-only mortgage loans

The following information is presented for HSBC branded interest-only mortgage loans. This excludes offset mortgages in first direct and private banking mortgages.

At the end of 2022, the average LTV ratio of the interest-only mortgage loans was 41% (2021: 40%) and 99% (2021: 99%) had a LTV ratio of 75% or less.

Of the interest-only mortgage loans that expired in 2020, 83% were repaid within 12 months of expiry with a total of 96% being repaid within 24 months of expiry. For those expiring during 2021, 95% were repaid within 12 months of expiry. The increase of the amount fully repaid within the 12 months is explained by the extensions granted as part of the FCA guidance on helping borrowers with maturing interest-only mortgages during the pandemic, which reduced the repayment rates within 12 months for cases maturing in 2022. Following the end of these extension in October 2021, repayment rates have now returned to levels similar to 2019.

At 31 December 2022, interest-only mortgage loans exposures were $14.4bn and the maturity profile is as follows:

UK interest-only mortgage loans

	$m
Expired interest-only mortgage loans	**134**
Interest-only mortgage loans by maturity	
– 2023	**219**
– 2024	**215**
– 2025	**300**
– 2026	**383**
– 2027–2031	**2,951**
– post-2031	**10,248**
At 31 Dec 2022	**14,450**

Expired interest-only mortgage loans	167
Interest-only mortgage loans by maturity	
– 2022	267
– 2023	401
– 2024	330
– 2025	420
– 2026–2030	3,288
– post-2030	10,333
At 31 Dec 2021	15,206

Exposure to offset mortgage in first direct

The offset mortgage in first direct is a flexible way for our customers to take control of their finances. It works by grouping together the customer's mortgage, savings and current accounts to offset their credit and debit balances against their mortgage exposure.

At 31 December 2022, exposures were worth a total $5.5bn with an average LTV ratio of 32% (2021: $7.0bn exposure and 35% LTV ratio).

Personal lending – reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired			
	Stage 1		Stage 2		Stage 3		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**695,840**	**(695)**	**18,201**	**(1,221)**	**5,111**	**(1,226)**	**719,152**	**(3,142)**
Transfers of financial instruments	**(40,834)**	**(499)**	**39,483**	**677**	**1,351**	**(178)**	**—**	**—**
– transfers from stage 1 to stage 2	**(68,063)**	**269**	**68,063**	**(269)**	**—**	**—**	**—**	**—**
– transfers from stage 2 to stage 1	**27,407**	**(734)**	**(27,407)**	**734**	**—**	**—**	**—**	**—**
– transfers to stage 3	**(561)**	**2**	**(1,987)**	**361**	**2,548**	**(363)**	**—**	**—**
– transfers from stage 3	**383**	**(36)**	**814**	**(149)**	**(1,197)**	**185**	**—**	**—**
Net remeasurement of ECL arising from transfer of stage	**—**	**498**	**—**	**(583)**	**—**	**(88)**	**—**	**(173)**
New financial assets originated or purchased	**130,632**	**(271)**	**—**	**—**	**—**	**—**	**130,632**	**(271)**
Assets derecognised (including final repayments)	**(68,645)**	**94**	**(4,091)**	**270**	**(1,043)**	**124**	**(73,779)**	**488**
Changes to risk parameters – further lending/ repayments	**(31,457)**	**162**	**4,538**	**(35)**	**897**	**(33)**	**(26,022)**	**94**
Change in risk parameters – credit quality	**—**	**82**	**—**	**(676)**	**—**	**(822)**	**—**	**(1,416)**
Changes to models used for ECL calculation	**—**	**(2)**	**—**	**(94)**	**—**	**13**	**—**	**(83)**
Assets written off	**—**	**—**	**—**	**—**	**(1,215)**	**1,215**	**(1,215)**	**1,215**
Foreign exchange and other[1]	**(82,111)**	**43**	**(5,543)**	**156**	**(961)**	**190**	**(88,615)**	**389**
At 31 Dec 2022	**603,425**	**(588)**	**52,588**	**(1,506)**	**4,140**	**(805)**	**660,153**	**(2,899)**
ECL income statement change for the period		**563**		**(1,118)**		**(806)**		**(1,361)**
Recoveries								**283**
Other								**(3)**
Total ECL income statement change for the period								**(1,081)**

1 *Total includes $49.6bn of gross carrying loans and advances to customers, which were classified to assets held for sale, and a corresponding allowance for ECL of $221m, reflecting business disposals as disclosed in Note 23 'Assets held for sale and liabilities of disposal groups held for sale' on page 389.*

As shown in the above table, the allowance for ECL for loans and advances to customers and relevant loan commitments and financial guarantees decreased by $243m during the period from $3,142m at 31 December 2021 to $2,899m at 31 December 2022.

This decrease was primarily driven by:

- $1,215m of assets written off;
- foreign exchange and other movements of $389m; and
- $311m relating to volume movements, which included the ECL allowance associated with new originations, assets derecognised and further lending/repayment.

These were partly offset by:

- $1,416m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages;
- $173m relating to the net remeasurement impact of stage transfers; and
- $83m of changes to models used for ECL calculation.

The ECL charge for the period of $1,361m presented in the above table consisted of $1,416m relating to underlying credit quality changes, including the credit quality impact of financial instruments transferring between stages, $83m in changes to models used for ECL calculation and $173m relating to the net remeasurement impact of stage transfers. This was partly offset by $311m relating to underlying net book volume movements.

During the period, there was a net transfer to stage 2 of $40,656m gross carrying/nominal amounts. This increase was primarily driven by $36,816m in Europe, of which $34,278m was from the UK, largely due to enhancements in the SICR approach in relation to capturing relative movements in PD since origination and taking into consideration cost of living pressures. Further details are presented on page 187.

Personal lending – reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to customers including loan commitments and financial guarantees

(Audited)

	Non-credit impaired				Credit impaired			
	Stage 1		Stage 2		Stage 3		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2021	665,346	(866)	26,770	(2,405)	5,762	(1,503)	697,878	(4,774)
Transfers of financial instruments	1,822	(1,154)	(4,502)	1,713	2,680	(559)	—	—
– transfers from stage 1 to stage 2	(23,701)	289	23,701	(289)	—	—	—	—
– transfers from stage 2 to stage 1	26,086	(1,404)	(26,086)	1,404	—	—	—	—
– transfers to stage 3	(982)	7	(3,068)	734	4,050	(741)	—	—
– transfers from stage 3	419	(46)	951	(136)	(1,370)	182	—	—
Net remeasurement of ECL arising from transfer of stage	—	825	—	(363)	—	(7)	—	455
New financial assets originated or purchased	136,920	(211)	—	—	—	—	136,920	(211)
Assets derecognised (including final repayments)	(82,998)	119	(5,257)	419	(1,236)	219	(89,491)	757
Changes to risk parameters – further lending/ repayments	(13,976)	240	2,380	114	(281)	51	(11,877)	405
Change in risk parameters – credit quality	—	318	—	(778)	—	(1,007)	—	(1,467)
Changes to models used for ECL calculation	—	(2)	—	—	—	1	—	(1)
Assets written off	—	—	—	—	(1,525)	1,520	(1,525)	1,520
Foreign exchange	(9,074)	17	(358)	19	(138)	45	(9,570)	81
Others[1]	(2,200)	19	(832)	60	(151)	14	(3,183)	93
At 31 Dec 2021	695,840	(695)	18,201	(1,221)	5,111	(1,226)	719,152	(3,142)
ECL income statement change for the period		1,289		(608)		(743)		(62)
Recoveries								355
Other								(9)
Total ECL income statement change for the period								284

1 Total includes $3.0bn of gross carrying loans and advances to customers, which were classified to assets held for sale, and a corresponding allowance for ECL of $123m, reflecting our exit of the domestic mass market retail banking in the US.

Personal lending – credit risk profile by internal PD band for loans and advances to customers at amortised cost

		Gross carrying amount				Allowance for ECL				
	PD range[1]	**Stage 1**	**Stage 2**	**Stage 3**	**Total**	**Stage 1**	**Stage 2**	**Stage 3**	**Total**	**ECL coverage**
	%	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**%**
First lien residential mortgages		**294,918**	**39,860**	**2,043**	**336,821**	**(74)**	**(230)**	**(270)**	**(574)**	**0.2**
– Band 1	**0.000 to 0.250**	**247,330**	**21,220**	**—**	**268,550**	**(13)**	**(4)**	**—**	**(17)**	**—**
– Band 2	**0.251 to 0.500**	**19,614**	**7,900**	**—**	**27,514**	**(4)**	**(3)**	**—**	**(7)**	**—**
– Band 3	**0.501 to 1.500**	**21,323**	**5,691**	**—**	**27,014**	**(18)**	**(7)**	**—**	**(25)**	**0.1**
– Band 4	**1.501 to 5.000**	**6,594**	**2,694**	**—**	**9,288**	**(39)**	**(24)**	**—**	**(63)**	**0.7**
– Band 5	**5.001 to 20.000**	**34**	**1,024**	**—**	**1,058**	**—**	**(40)**	**—**	**(40)**	**3.8**
– Band 6	**20.001 to 99.999**	**23**	**1,331**	**—**	**1,354**	**—**	**(152)**	**—**	**(152)**	**11.2**
– Band 7	**100.000**	**—**	**—**	**2,043**	**2,043**	**—**	**—**	**(270)**	**(270)**	**13.2**
Other personal lending		**67,863**	**9,031**	**1,297**	**78,191**	**(488)**	**(1,275)**	**(535)**	**(2,298)**	**2.9**
– Band 1	**0.000 to 0.250**	**30,151**	**153**	**—**	**30,304**	**(54)**	**(13)**	**—**	**(67)**	**0.2**
– Band 2	**0.251 to 0.500**	**7,219**	**251**	**—**	**7,470**	**(26)**	**(1)**	**—**	**(27)**	**0.4**
– Band 3	**0.501 to 1.500**	**17,183**	**1,499**	**—**	**18,682**	**(82)**	**(44)**	**—**	**(126)**	**0.7**
– Band 4	**1.501 to 5.000**	**10,342**	**2,061**	**—**	**12,403**	**(171)**	**(104)**	**—**	**(275)**	**2.2**
– Band 5	**5.001 to 20.000**	**2,501**	**3,692**	**—**	**6,193**	**(154)**	**(520)**	**—**	**(674)**	**10.9**
– Band 6	**20.001 to 99.999**	**467**	**1,375**	**—**	**1,842**	**(1)**	**(593)**	**—**	**(594)**	**32.2**
– Band 7	**100.000**	**—**	**—**	**1,297**	**1,297**	**—**	**—**	**(535)**	**(535)**	**41.2**
At 31 Dec 2022		**362,781**	**48,891**	**3,340**	**415,012**	**(562)**	**(1,505)**	**(805)**	**(2,872)**	**0.7**

1 12-month point in time adjusted for multiple economic scenarios.

Personal lending – credit risk profile by internal PD band for loans and advances to customers at amortised cost (continued)

		Gross carrying amount				Allowance for ECL				
	PD range[1]	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	ECL coverage
	%	$m	$m	$m	$m	$m	$m	$m	$m	%
First lien residential mortgages		360,686	7,637	3,045	371,368	(128)	(131)	(416)	(675)	0.2
– Band 1	0.000 to 0.250	310,042	451	—	310,493	(30)	(5)	—	(35)	—
– Band 2	0.251 to 0.500	19,741	203	—	19,944	(7)	(2)	—	(9)	—
– Band 3	0.501 to 1.500	25,835	1,936	—	27,771	(79)	(8)	—	(87)	0.3
– Band 4	1.501 to 5.000	4,976	2,657	—	7,633	(12)	(30)	—	(42)	0.6
– Band 5	5.001 to 20.000	88	1,416	—	1,504	—	(35)	—	(35)	2.3
– Band 6	20.001 to 99.999	4	974	—	978	—	(51)	—	(51)	5.2
– Band 7	100.000	—	—	3,045	3,045	—	—	(416)	(416)	13.7
Other personal lending		96,270	8,802	1,897	106,969	(530)	(1,088)	(810)	(2,428)	2.3
– Band 1	0.000 to 0.250	45,049	187	—	45,236	(50)	(13)	—	(63)	0.1
– Band 2	0.251 to 0.500	12,625	605	—	13,230	(27)	(6)	—	(33)	0.2
– Band 3	0.501 to 1.500	22,791	1,518	—	24,309	(102)	(30)	—	(132)	0.5
– Band 4	1.501 to 5.000	13,006	2,360	—	15,366	(213)	(108)	—	(321)	2.1
– Band 5	5.001 to 20.000	2,732	3,257	—	5,989	(138)	(554)	—	(692)	11.6
– Band 6	20.001 to 99.999	67	875	—	942	—	(377)	—	(377)	40.0
– Band 7	100.000	—	—	1,897	1,897	—	—	(810)	(810)	42.7
At 31 Dec 2021		456,956	16,439	4,942	478,337	(658)	(1,219)	(1,226)	(3,103)	0.6

1 12-month point in time adjusted for multiple economic scenarios.

Collateral on loans and advances

(Audited)

The following table provides a quantification of the value of fixed charges we hold over specific assets where we have a history of enforcing, and are able to enforce, collateral in satisfying a debt in the event of the borrower failing to meet its contractual obligations, and where the collateral is cash or can be realised by sale in an established market. The collateral valuation excludes any adjustments for obtaining and selling the collateral and, in particular, loans shown as not collateralised or partially collateralised may also benefit from other forms of credit mitigants.

Personal lending – residential mortgage loans including loan commitments by level of collateral for key countries/territories by stage
(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	$m	%	$m	%	$m	%
Stage 1						
Fully collateralised	310,705	—	134,044	—	94,949	—
LTV ratio:						
– less than 50%	154,337	—	70,936	—	44,740	—
– 51% to 60%	57,386	—	23,226	—	18,027	—
– 61% to 70%	44,805	—	20,391	—	10,096	—
– 71% to 80%	25,458	—	12,849	—	4,167	—
– 81% to 90%	17,106	—	5,922	—	7,883	—
– 91% to 100%	11,613	—	720	—	10,036	—
Partially collateralised (A):	6,964	—	329	—	6,441	—
LTV ratio:						
– 101% to 110%	6,127	—	73	—	5,953	—
– 111% to 120%	570	—	61	—	482	—
– greater than 120%	267	0.4	195	—	6	—
– *collateral value on A*	6,521		237		6,146	
Total	317,669	—	134,373	—	101,390	—
Stage 2						
Fully collateralised	39,906	0.6	34,541	0.4	981	—
LTV ratio:						
– less than 50%	12,250	0.7	10,387	0.6	577	—
– 51% to 60%	7,372	0.5	6,402	0.4	171	—
– 61% to 70%	9,617	0.4	8,541	0.3	85	—
– 71% to 80%	6,770	0.5	5,922	0.3	37	—
– 81% to 90%	3,388	0.5	2,918	0.2	51	0.1
– 91% to 100%	509	1.1	371	0.2	60	0.2
Partially collateralised (B):	143	6.9	49	0.3	47	0.2
LTV ratio:						
– 101% to 110%	73	3.6	10	1.2	45	0.2
– 111% to 120%	24	12.5	10	—	2	—
– greater than 120%	46	9.1	29	0.1	—	—
– *collateral value on B*	123		38		44	
Total	40,049	0.6	34,590	0.4	1,028	—
Stage 3						
Fully collateralised	2,097	9.9	676	11.1	237	0.1
LTV ratio:						
– less than 50%	1,077	7.2	448	9.4	105	—
– 51% to 60%	330	7.6	110	9.7	26	0.1
– 61% to 70%	207	12.6	48	15.9	11	0.7
– 71% to 80%	212	14.7	33	19.7	25	0.1
– 81% to 90%	147	17.8	10	24.5	27	—
– 91% to 100%	124	18.1	27	22.5	43	—
Partially collateralised (C):	133	46.9	12	9.8	1	0.3
LTV ratio:						
– 101% to 110%	37	24.3	10	3.7	1	0.4
– 111% to 120%	17	32.7	—	64.9	—	—
– greater than 120%	79	60.5	2	36.2	—	—
– *collateral value on C*	79		4		1	
Total	2,230	12.1	688	11.1	238	0.1
At 31 Dec 2022	359,948	0.2	169,651	0.1	102,656	—

Personal lending – residential mortgage loans including loan commitments by level of collateral for key countries/territories by stage (continued)

(Audited)

	Total		of which: UK		of which: Hong Kong	
	Gross carrying/ nominal amount	ECL coverage	*Gross carrying/ nominal amount*	*ECL coverage*	*Gross carrying/ nominal amount*	*ECL coverage*
	$m	%	*$m*	*%*	*$m*	*%*
Stage 1						
Fully collateralised	377,454	—	*168,737*	—	*98,020*	—
LTV ratio:						
– less than 50%	190,370	—	*81,582*	—	*61,234*	—
– 51% to 60%	64,217	—	*28,555*	—	*12,070*	—
– 61% to 70%	51,842	—	*25,949*	—	*4,649*	—
– 71% to 80%	46,932	0.1	*24,114*	—	*8,360*	—
– 81% to 90%	18,778	0.1	*7,899*	—	*8,420*	—
– 91% to 100%	5,315	0.1	*638*	—	*3,287*	—
Partially collateralised (A):	682	0.3	*358*	—	*30*	—
LTV ratio:						
– 101% to 110%	254	0.6	*104*	—	*26*	—
– 111% to 120%	98	0.4	*60*	—	*1*	—
– greater than 120%	330	0.1	*194*	—	*3*	—
– *collateral value on A*	*484*		235		28	
Total	378,136	—	*169,095*	—	*98,050*	—
Stage 2						
Fully collateralised	7,710	1.7	*2,738*	*2.1*	*1,166*	—
LTV ratio:						
– less than 50%	4,380	1.5	*1,846*	*1.6*	*905*	—
– 51% to 60%	1,317	1.4	*397*	*2.4*	*106*	—
– 61% to 70%	1,016	1.6	*282*	*3.0*	*34*	—
– 71% to 80%	725	2.3	*175*	*4.7*	*50*	—
– 81% to 90%	208	4.3	*32*	*5.6*	*58*	—
– 91% to 100%	64	4.1	*6*	*1.9*	*13*	—
Partially collateralised (B):	24	13.6	*3*	*7.7*	—	—
LTV ratio:						
– 101% to 110%	7	18.6	*1*	*1.0*	—	—
– 111% to 120%	8	16.6	—	—	—	—
– greater than 120%	9	6.7	*2*	*11.1*	—	—
– *collateral value on B*	*20*		2		—	
Total	7,734	1.7	*2,741*	*2.1*	*1,166*	—
Stage 3						
Fully collateralised	2,853	11.5	*954*	*14.2*	*68*	*0.3*
LTV ratio:						
– less than 50%	1,490	9.2	*635*	*13.0*	*48*	*0.5*
– 51% to 60%	443	8.6	*129*	*14.0*	*10*	*0.1*
– 61% to 70%	371	10.9	*79*	*16.2*	*2*	*0.1*
– 71% to 80%	256	15.4	*67*	*19.1*	*3*	—
– 81% to 90%	171	20.4	*21*	*25.2*	*4*	—
– 91% to 100%	122	32.2	*23*	*18.6*	*1*	—
Partially collateralised (C):	220	39.6	*7*	*30.8*	—	—
LTV ratio:						
– 101% to 110%	56	27.5	*4*	*22.3*	—	—
– 111% to 120%	29	29.2	—	—	—	—
– greater than 120%	135	46.9	*3*	*45.5*	—	—
– *collateral value on C*	*143*		6		—	
Total	3,073	13.5	*961*	*14.4*	*68*	*0.3*
At 31 Dec 2021	388,943	0.2	*172,797*	*0.1*	*99,284*	—

Supplementary information

Wholesale lending – loans and advances to customers at amortised cost by country/territory

	Gross carrying amount				Allowance for ECL			
	Corporate and commercial	*Of which: real estate*[1]	Non-bank financial institutions	Total	Corporate and commercial	*Of which: real estate*[1]	Non-bank financial institutions	Total
	$m	*$m*	$m	$m	$m	*$m*	$m	$m
Europe	**146,236**	***19,814***	**18,198**	**164,434**	**(2,376)**	***(370)***	**(139)**	**(2,515)**
– UK	**104,775**	***14,309***	**12,663**	**117,438**	**(1,522)**	***(329)***	**(130)**	**(1,652)**
– France	**27,571**	***4,216***	**4,152**	**31,723**	**(622)**	***(36)***	**(4)**	**(626)**
– Germany	**6,603**	***252***	**713**	**7,316**	**(154)**	**—**	**(3)**	**(157)**
– Switzerland	**988**	***635***	**298**	**1,286**	**(8)**	**—**	**—**	**(8)**
– other	**6,299**	***402***	**372**	**6,671**	**(70)**	***(5)***	**(2)**	**(72)**
Asia	**245,872**	***73,164***	**38,863**	**284,735**	**(4,361)**	***(2,197)***	**(77)**	**(4,438)**
– Hong Kong	**145,411**	***56,161***	**20,812**	**166,223**	**(3,001)**	***(1,966)***	**(36)**	**(3,037)**
– Australia	**11,641**	***3,106***	**1,157**	**12,798**	**(97)**	***(1)***	**—**	**(97)**
– India	**9,052**	***1,711***	**4,267**	**13,319**	**(80)**	***(22)***	**(10)**	**(90)**
– Indonesia	**3,214**	***85***	**226**	**3,440**	**(187)**	***(1)***	**—**	**(187)**
– mainland China	**31,790**	***5,752***	**8,908**	**40,698**	**(328)**	***(167)***	**(30)**	**(358)**
– Malaysia	**5,986**	***1,081***	**180**	**6,166**	**(133)**	***(15)***	**—**	**(133)**
– Singapore	**15,904**	***3,812***	**1,192**	**17,096**	**(388)**	***(12)***	**(1)**	**(389)**
– Taiwan	**4,700**	***20***	**65**	**4,765**	**(1)**	**—**	**—**	**(1)**
– other	**18,174**	***1,436***	**2,056**	**20,230**	**(146)**	***(13)***	**—**	**(146)**
Middle East and North Africa (excluding Saudi Arabia)	**21,565**	***1,766***	**324**	**21,889**	**(983)**	***(158)***	**(3)**	**(986)**
– Egypt	**1,261**	***77***	**101**	**1,362**	**(117)**	***(5)***	**(1)**	**(118)**
– UAE	**13,503**	***1,569***	**149**	**13,652**	**(673)**	***(152)***	**—**	**(673)**
– other	**6,801**	***120***	**74**	**6,875**	**(193)**	***(1)***	**(2)**	**(195)**
North America	**28,619**	***5,783***	**8,791**	**37,410**	**(230)**	***(102)***	**(37)**	**(267)**
– US	**28,249**	***5,714***	**8,640**	**36,889**	**(214)**	***(94)***	**(26)**	**(240)**
– Canada[2]	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
– other	**370**	***69***	**151**	**521**	**(16)**	***(8)***	**(11)**	**(27)**
Latin America	**12,064**	***907***	**763**	**12,827**	**(374)**	***(24)***	**(1)**	**(375)**
– Mexico	**9,784**	***903***	**717**	**10,501**	**(335)**	***(24)***	**(1)**	**(336)**
– other	**2,280**	***4***	**46**	**2,326**	**(39)**	**—**	**—**	**(39)**
At 31 Dec 2022	**454,356**	***101,434***	**66,939**	**521,295**	**(8,324)**	***(2,851)***	**(257)**	**(8,581)**
Europe	163,341	*23,137*	17,818	181,159	(2,770)	*(546)*	(41)	(2,811)
– UK	115,386	*16,233*	11,306	126,692	(1,855)	*(489)*	(32)	(1,887)
– France	34,488	*5,520*	4,391	38,879	(654)	*(47)*	(2)	(656)
– Germany	6,746	*306*	987	7,733	(120)	*—*	(3)	(123)
– Switzerland	1,188	*731*	688	1,876	(8)	*—*	—	(8)
– other	5,533	*347*	446	5,979	(133)	*(10)*	(4)	(137)
Asia	263,821	*81,453*	36,321	300,142	(3,297)	*(731)*	(44)	(3,341)
– Hong Kong	162,684	*62,792*	20,182	182,866	(1,585)	*(624)*	(7)	(1,592)
– Australia	9,937	*2,596*	717	10,654	(108)	*(3)*	—	(108)
– India	8,221	*1,786*	4,003	12,224	(84)	*(29)*	(8)	(92)
– Indonesia	3,436	*86*	226	3,662	(246)	*(2)*	(1)	(247)
– mainland China	33,555	*6,811*	9,359	42,914	(198)	*(41)*	(28)	(226)
– Malaysia	7,229	*1,741*	197	7,426	(172)	*(21)*	—	(172)
– Singapore	16,401	*4,158*	782	17,183	(792)	*(5)*	—	(792)
– Taiwan	6,291	*31*	47	6,338	—	*—*	—	—
– other	16,067	*1,452*	808	16,875	(112)	*(6)*	—	(112)
Middle East and North Africa (excluding Saudi Arabia)	21,963	*1,555*	376	22,339	(1,207)	*(158)*	(3)	(1,210)
– Egypt	1,788	*69*	152	1,940	(161)	*(7)*	—	(161)
– UAE	12,942	*1,370*	190	13,132	(811)	*(149)*	—	(811)
– other	7,233	*116*	34	7,267	(235)	*(2)*	(3)	(238)
North America	52,577	*13,639*	10,197	62,774	(427)	*(87)*	(18)	(445)
– US	27,002	*5,895*	8,511	35,513	(207)	*(64)*	(1)	(208)
– Canada	25,048	*7,650*	1,546	26,594	(198)	*(15)*	(6)	(204)
– other	527	*94*	140	667	(22)	*(8)*	(11)	(33)
Latin America	11,837	*1,476*	643	12,480	(503)	*(122)*	(4)	(507)
– Mexico	9,561	*1,475*	618	10,179	(452)	*(122)*	(4)	(456)
– other	2,276	*1*	25	2,301	(51)	*—*	—	(51)
At 31 Dec 2021	513,539	*121,260*	65,355	578,894	(8,204)	*(1,644)*	(110)	(8,314)

1 *Real estate lending within this disclosure corresponds solely to the industry of the borrower. Commercial real estate on page 177 includes borrowers in multiple industries investing in income-producing assets and to a lesser extent, their construction and development.*
2 *Classified as held for sale at 31 December 2022.*

Personal lending – loans and advances to customers at amortised cost by country/territory

	Gross carrying amount				Allowance for ECL			
	First lien residential mortgages	Other personal	*Of which: credit cards*	Total	First lien residential mortgages	Other personal	*Of which: credit cards*	Total
	$m	$m	*$m*	$m	$m	$m	*$m*	$m
Europe	**159,063**	**23,830**	***6,665***	**182,893**	**(265)**	**(874)**	***(451)***	**(1,139)**
– UK	**154,519**	**16,794**	***6,622***	**171,313**	**(226)**	**(837)**	***(449)***	**(1,063)**
– France[1]	**30**	**76**	***9***	**106**	**(14)**	**(8)**	**—**	**(22)**
– Germany	**—**	**234**	**—**	**234**	**—**	**—**	**—**	**—**
– Switzerland	**1,378**	**5,094**	**—**	**6,472**	**—**	**(22)**	**—**	**(22)**
– other	**3,136**	**1,632**	***34***	**4,768**	**(25)**	**(7)**	**(2)**	**(32)**
Asia	**151,058**	**44,610**	***11,805***	**195,668**	**(50)**	**(640)**	***(423)***	**(690)**
– Hong Kong	**101,478**	**31,539**	***8,645***	**133,017**	**(1)**	**(352)**	***(258)***	**(353)**
– Australia	**21,372**	**456**	***396***	**21,828**	**(11)**	**(19)**	***(18)***	**(30)**
– India	**1,078**	**590**	***162***	**1,668**	**(4)**	**(18)**	***(13)***	**(22)**
– Indonesia	**70**	**278**	***141***	**348**	**(1)**	**(17)**	***(12)***	**(18)**
– mainland China	**9,305**	**921**	***378***	**10,226**	**(3)**	**(62)**	***(49)***	**(65)**
– Malaysia	**2,292**	**2,437**	***843***	**4,729**	**(27)**	**(93)**	***(31)***	**(120)**
– Singapore	**7,501**	**6,264**	***422***	**13,765**	**—**	**(36)**	***(14)***	**(36)**
– Taiwan	**5,428**	**1,189**	***284***	**6,617**	**—**	**(18)**	***(5)***	**(18)**
– other	**2,534**	**936**	***534***	**3,470**	**(3)**	**(25)**	***(23)***	**(28)**
Middle East and North Africa (excluding Saudi Arabia)	**2,450**	**3,266**	***735***	**5,716**	**(22)**	**(123)**	***(52)***	**(145)**
– Egypt	**—**	**310**	***83***	**310**	**—**	**(2)**	***(1)***	**(2)**
– UAE	**2,104**	**1,340**	***426***	**3,444**	**(14)**	**(83)**	***(41)***	**(97)**
– other	**346**	**1,616**	***226***	**1,962**	**(8)**	**(38)**	***(10)***	**(46)**
North America	**17,907**	**866**	***256***	**18,773**	**(91)**	**(35)**	***(24)***	**(126)**
– US	**16,847**	**704**	***213***	**17,551**	**(10)**	**(30)**	***(23)***	**(40)**
– Canada[2]	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
– other	**1,060**	**162**	***43***	**1,222**	**(81)**	**(5)**	***(1)***	**(86)**
Latin America	**6,343**	**5,619**	***1,927***	**11,962**	**(146)**	**(626)**	***(212)***	**(772)**
– Mexico	**6,124**	**4,894**	***1,615***	**11,018**	**(145)**	**(593)**	***(196)***	**(738)**
– other	**219**	**725**	***312***	**944**	**(1)**	**(33)**	***(16)***	**(34)**
At 31 Dec 2022	**336,821**	**78,191**	***21,388***	**415,012**	**(574)**	**(2,298)**	***(1,162)***	**(2,872)**
Europe	170,818	49,253	*8,624*	220,071	(329)	(1,006)	*(437)*	(1,335)
– UK	163,549	19,154	*8,213*	182,703	(223)	(823)	*(434)*	(1,046)
– France[1]	3,124	22,908	*366*	26,032	(38)	(91)	*(3)*	(129)
– Germany	—	282	—	282	—	—	—	—
– Switzerland	1,367	6,615	—	7,982	—	(75)	—	(75)
– other	2,778	294	*45*	3,072	(68)	(17)	—	(85)
Asia	149,709	46,781	*11,413*	196,490	(59)	(706)	(428)	(765)
– Hong Kong	98,019	32,996	*8,154*	131,015	(1)	(338)	*(217)*	(339)
– Australia	21,149	504	*427*	21,653	(5)	(33)	*(32)*	(38)
– India	981	543	*181*	1,524	(10)	(30)	*(20)*	(40)
– Indonesia	76	272	*147*	348	(1)	(20)	*(14)*	(21)
– mainland China	10,525	1,103	*563*	11,628	(4)	(72)	*(66)*	(76)
– Malaysia	2,532	2,657	*791*	5,189	(33)	(122)	*(34)*	(155)
– Singapore	7,811	6,649	*367*	14,460	—	(40)	*(13)*	(40)
– Taiwan	5,672	1,188	*271*	6,860	—	(17)	*(5)*	(17)
– other	2,944	869	*512*	3,813	(5)	(34)	*(27)*	(39)
Middle East and North Africa (excluding Saudi Arabia)	2,262	3,157	*761*	5,419	(26)	(146)	*(60)*	(172)
– Egypt	—	368	*98*	368	—	(3)	*(1)*	(3)
– UAE	1,924	1,232	*417*	3,156	(18)	(88)	*(39)*	(106)
– other	338	1,557	*246*	1,895	(8)	(55)	*(20)*	(63)
North America	43,529	3,091	*555*	46,620	(141)	(87)	*(47)*	(228)
– US	16,642	799	*232*	17,441	(12)	(53)	*(36)*	(65)
– Canada	25,773	2,123	*284*	27,896	(33)	(27)	*(8)*	(60)
– other	1,114	169	*39*	1,283	(96)	(7)	*(3)*	(103)
Latin America	5,050	4,687	*1,505*	9,737	(120)	(483)	*(163)*	(603)
– Mexico	4,882	4,006	*1,172*	8,888	(119)	(450)	*(148)*	(569)
– other	168	681	*333*	849	(1)	(33)	*(15)*	(34)
At 31 Dec 2021	371,368	106,969	*22,858*	478,337	(675)	(2,428)	*(1,135)*	(3,103)

1 *Included in other personal lending at 31 December 2022 is nil (31 December 2021: $19,972m) guaranteed by Crédit Logement as our retail banking business in France has been classified as held for sale.*
2 *Classified as held for sale at 31 December 2022.*

Summary of financial instruments to which the impairment requirements in IFRS 9 are applied – by global business

	Gross carrying/nominal amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	777,543	139,130	19,505	129	936,307	(1,095)	(3,491)	(6,829)	(38)	(11,453)
– WPB	373,889	49,096	3,502	—	426,487	(572)	(1,512)	(850)	—	(2,934)
– CMB	232,296	69,784	12,794	112	314,986	(435)	(1,529)	(4,891)	(38)	(6,893)
– GBM	171,033	20,207	3,209	17	194,466	(88)	(437)	(1,088)	—	(1,613)
– Corporate Centre	325	43	—	—	368	—	(13)	—	—	(13)
Loans and advances to banks at amortised cost	103,042	1,827	82	—	104,951	(18)	(29)	(22)	—	(69)
– WPB	26,111	377	—	—	26,488	(3)	(1)	—	—	(4)
– CMB	23,735	257	4	—	23,996	(5)	—	(2)	—	(7)
– GBM	47,128	1,050	78	—	48,256	(9)	(28)	(20)	—	(57)
– Corporate Centre	6,068	143	—	—	6,211	(1)	—	—	—	(1)
Other financial assets measured at amortised cost	996,489	17,166	797	46	1,014,498	(124)	(188)	(234)	(7)	(553)
– WPB	248,708	5,644	458	46	254,856	(57)	(96)	(130)	(7)	(290)
– CMB	184,459	10,883	253	—	195,595	(37)	(84)	(91)	—	(212)
– GBM	486,224	637	78	—	486,939	(28)	(8)	(13)	—	(49)
– Corporate Centre	77,098	2	8	—	77,108	(2)	—	—	—	(2)
Total gross carrying amount on-balance sheet at 31 Dec 2022	1,877,074	158,123	20,384	175	2,055,756	(1,237)	(3,708)	(7,085)	(45)	(12,075)
Loans and other credit-related commitments	583,383	34,033	1,372	—	618,788	(141)	(180)	(65)	—	(386)
– WPB	238,161	4,377	769	—	243,307	(25)	(1)	—	—	(26)
– CMB	121,909	18,376	512	—	140,797	(78)	(128)	(55)	—	(261)
– GBM	223,065	11,279	91	—	234,435	(38)	(51)	(10)	—	(99)
– Corporate Centre	248	1	—	—	249	—	—	—	—	—
Financial guarantees	16,071	2,463	249	—	18,783	(6)	(13)	(33)	—	(52)
– WPB	1,196	11	1	—	1,208	—	—	—	—	—
– CMB	6,665	1,524	128	—	8,317	(5)	(8)	(26)	—	(39)
– GBM	8,210	928	120	—	9,258	(1)	(5)	(7)	—	(13)
– Corporate Centre	—	—	—	—	—	—	—	—	—	—
Total nominal amount off-balance sheet at 31 Dec 2022	599,454	36,496	1,621	—	637,571	(147)	(193)	(98)	—	(438)
WPB	113,557	1,213	—	33	114,803	(18)	(26)	—	(6)	(50)
CMB	70,728	736	—	4	71,468	(9)	(15)	—	(1)	(25)
GBM	75,951	434	—	1	76,386	(11)	(8)	—	—	(19)
Corporate Centre	3,347	299	—	—	3,646	(31)	(19)	(1)	—	(51)
Debt instruments measured at FVOCI at 31 Dec 2022	263,583	2,682	—	38	266,303	(69)	(68)	(1)	(7)	(145)

Summary of financial instruments to which the impairment requirements in IFRS 9 are applied – by global business (continued)

	Gross carrying/nominal amount					Allowance for ECL				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers at amortised cost	918,936	119,224	18,797	274	1,057,231	(1,367)	(3,119)	(6,867)	(64)	(11,417)
– WPB	469,477	17,285	5,211	—	491,973	(664)	(1,247)	(1,276)	—	(3,187)
– CMB	267,517	76,798	11,462	245	356,022	(571)	(1,369)	(4,904)	(53)	(6,897)
– GBM	181,247	25,085	2,124	29	208,485	(132)	(493)	(687)	(11)	(1,323)
– Corporate Centre	695	56	—	—	751	—	(10)	—	—	(10)
Loans and advances to banks at amortised cost	81,636	1,517	—	—	83,153	(14)	(3)	—	—	(17)
– WPB	20,464	481	—	—	20,945	(1)	(1)	—	—	(2)
– CMB	15,269	352	—	—	15,621	(1)	—	—	—	(1)
– GBM	36,875	654	—	—	37,529	(10)	(2)	—	—	(12)
– Corporate Centre	9,028	30	—	—	9,058	(2)	—	—	—	(2)
Other financial assets measured at amortised cost	875,016	4,988	304	43	880,351	(91)	(54)	(42)	(6)	(193)
– WPB	207,335	1,407	175	43	208,960	(51)	(44)	(14)	(6)	(115)
– CMB	163,457	2,370	61	—	165,888	(12)	(8)	(20)	—	(40)
– GBM	409,808	1,204	62	—	411,074	(28)	(2)	(8)	—	(38)
– Corporate Centre	94,416	7	6	—	94,429	—	—	—	—	—
Total gross carrying amount on-balance sheet at 31 Dec 2021	1,875,588	125,729	19,101	317	2,020,735	(1,472)	(3,176)	(6,909)	(70)	(11,627)
Loans and other credit-related commitments	594,473	32,389	775	—	627,637	(165)	(174)	(40)	—	(379)
– WPB	235,722	2,111	153	—	237,986	(37)	(3)	—	—	(40)
– CMB	126,728	17,490	555	—	144,773	(80)	(118)	(37)	—	(235)
– GBM	231,890	12,788	67	—	244,745	(48)	(53)	(3)	—	(104)
– Corporate Centre	133	—	—	—	133	—	—	—	—	—
Financial guarantees	24,932	2,638	225	—	27,795	(11)	(30)	(21)	—	(62)
– WPB	1,295	15	1	—	1,311	—	(1)	—	—	(1)
– CMB	6,105	1,606	126	—	7,837	(7)	(16)	(17)	—	(40)
– GBM	17,531	1,017	98	—	18,646	(4)	(13)	(4)	—	(21)
– Corporate Centre	1	—	—	—	1	—	—	—	—	—
Total nominal amount off-balance sheet at 31 Dec 2021	619,405	35,027	1,000	—	655,432	(176)	(204)	(61)	—	(441)
WPB	143,373	718	—	35	144,126	(20)	(7)	—	(5)	(32)
CMB	86,247	471	—	10	86,728	(11)	(1)	—	(1)	(13)
GBM	111,473	526	—	1	112,000	(13)	(2)	—	—	(15)
Corporate Centre	4,038	311	—	—	4,349	(25)	(11)	—	—	(36)
Debt instruments measured at FVOCI at 31 Dec 2021	345,131	2,026	—	46	347,203	(69)	(21)	—	(6)	(96)

Loans and advances to customers and banks metrics

	Gross carrying amount	*of which: stage 3 and POCI*	Allowance for ECL	*of which: stage 3 and POCI*	Change in ECL	Write-offs	Recoveries
	$m	*$m*	$m	*$m*	$m	$m	$m
First lien residential mortgages	336,821	*2,043*	(574)	*(270)*	180	(48)	26
– second lien residential mortgages	379	*6*	(6)	*(3)*	9	(1)	4
– guaranteed loans in respect of residential property	1,367	*125*	(34)	*(30)*	(11)	(9)	2
– other personal lending which is secured	32,106	*206*	(55)	*(30)*	(16)	(8)	1
– credit cards	21,388	*260*	(1,162)	*(160)*	(638)	(471)	126
– other personal lending which is unsecured	21,010	*687*	(1,010)	*(305)*	(655)	(660)	119
– motor vehicle finance	1,941	*13*	(31)	*(7)*	39	(18)	5
Other personal lending	78,191	*1,297*	(2,298)	*(535)*	(1,272)	(1,167)	257
Personal lending	415,012	*3,340*	(2,872)	*(805)*	(1,092)	(1,215)	283
– agriculture, forestry and fishing	6,571	*261*	(122)	*(68)*	(32)	(42)	—
– mining and quarrying	8,194	*233*	(172)	*(146)*	(24)	(46)	—
– manufacturing	87,503	*2,065*	(1,153)	*(896)*	(191)	(171)	3
– electricity, gas, steam and air-conditioning supply	17,082	*277*	(109)	*(67)*	(75)	(16)	—
– water supply, sewerage, waste management and remediation	2,993	*26*	(21)	*(13)*	3	(1)	—
– construction	13,232	*798*	(443)	*(371)*	(93)	(136)	6
– wholesale and retail trade, repair of motor vehicles and motorcycles	82,437	*2,810*	(1,666)	*(1,344)*	(344)	(667)	8
– transportation and storage	24,845	*556*	(249)	*(153)*	(13)	(82)	1
– accommodation and food	17,185	*789*	(244)	*(82)*	103	(29)	—
– publishing, audiovisual and broadcasting	18,423	*277*	(117)	*(59)*	9	(47)	1
– real estate	101,434	*4,853*	(2,851)	*(1,861)*	(1,537)	(174)	2
– professional, scientific and technical activities	17,935	*542*	(272)	*(200)*	(81)	(31)	1
– administrative and support services	25,077	*980*	(408)	*(293)*	(27)	(27)	1
– public administration and defence, compulsory social security	1,180	—	(1)	—	5	—	—
– education	1,614	*87*	(31)	*(22)*	1	(3)	—
– health and care	3,964	*266*	(90)	*(67)*	(30)	(7)	1
– arts, entertainment and recreation	1,862	*146*	(77)	*(57)*	1	(17)	—
– other services	12,527	*589*	(275)	*(219)*	120	(92)	7
– activities of households	744	—	—	—	—	—	—
– extra-territorial organisations and bodies activities	47	—	—	—	1	—	1
– government	9,475	*270*	(10)	*(7)*	(5)	—	—
– asset-backed securities	32	—	(13)	—	(4)	—	—
Corporate and commercial	454,356	*15,825*	(8,324)	*(5,925)*	(2,213)	(1,588)	32
Non-bank financial institutions	66,939	*469*	(257)	*(137)*	(165)	(1)	1
Wholesale lending	521,295	*16,294*	(8,581)	*(6,062)*	(2,378)	(1,589)	33
Loans and advances to customers	936,307	*19,634*	(11,453)	*(6,867)*	(3,470)	(2,804)	316
Loans and advances to banks	104,951	*82*	(69)	*(22)*	(53)	—	—
At 31 Dec 2022	1,041,258	*19,716*	(11,522)	*(6,889)*	(3,523)	(2,804)	316

Loans and advances to customers and banks metrics (continued)

	Gross carrying amount	*of which: stage 3 and POCI*	Allowance for ECL	*of which: stage 3 and POCI*	Change in ECL	Write-offs	Recoveries
	$m	*$m*	$m	*$m*	$m	$m	$m
First lien residential mortgages	371,368	*3,045*	(675)	*(416)*	—	(70)	31
– second lien residential mortgages	395	*37*	(14)	*(9)*	12	(1)	6
– guaranteed loans in respect of residential property	21,610	*236*	(58)	*(42)*	(5)	(8)	2
– other personal lending which is secured	37,995	*366*	(156)	*(120)*	(11)	(11)	1
– credit cards	22,858	*338*	(1,135)	*(214)*	172	(751)	153
– other personal lending which is unsecured	22,478	*915*	(1,039)	*(421)*	135	(659)	156
– motor vehicle finance	1,633	*5*	(26)	*(4)*	(22)	(20)	6
Other personal lending	106,969	*1,897*	(2,428)	*(810)*	281	(1,450)	324
Personal lending	478,337	*4,942*	(3,103)	*(1,226)*	281	(1,520)	355
– agriculture, forestry and fishing	7,899	*363*	(138)	*(105)*	61	(5)	—
– mining and quarrying	9,685	*463*	(227)	*(171)*	72	(57)	(1)
– manufacturing	93,743	*2,107*	(1,248)	*(962)*	102	(222)	7
– electricity, gas, steam and air-conditioning supply	16,618	*78*	(68)	*(31)*	5	—	—
– water supply, sewerage, waste management and remediation	3,895	*51*	(29)	*(20)*	3	(7)	—
– construction	13,954	*843*	(508)	*(440)*	(13)	(94)	9
– wholesale and retail trade, repair of motor vehicles and motorcycles	94,944	*3,005*	(2,107)	*(1,937)*	163	(238)	15
– transportation and storage	29,592	*667*	(363)	*(191)*	100	(10)	2
– accommodation and food	23,376	*1,200*	(423)	*(111)*	12	(17)	6
– publishing, audiovisual and broadcasting	18,471	*250*	(184)	*(100)*	(12)	(4)	1
– real estate	121,260	*2,473*	(1,644)	*(775)*	(674)	(152)	5
– professional, scientific and technical activities	19,685	*637*	(238)	*(172)*	97	(39)	1
– administrative and support services	28,675	*749*	(431)	*(307)*	48	(37)	—
– public administration and defence, compulsory social security	1,271	—	(8)	—	6	—	1
– education	1,793	*65*	(37)	*(18)*	1	(1)	—
– health and care	4,854	*183*	(72)	*(37)*	44	(69)	1
– arts, entertainment and recreation	2,598	*152*	(92)	*(42)*	27	(26)	—
– other services	12,297	*448*	(373)	*(246)*	(59)	(109)	6
– activities of households	977	—	—	—	—	—	—
– extra-territorial organisations and bodies activities	2	—	—	—	1	—	1
– government	7,612	—	(4)	—	(6)	—	—
– asset-backed securities	338	—	(10)	—	3	—	—
Corporate and commercial	513,539	*13,734*	(8,204)	*(5,665)*	(19)	(1,087)	54
Non-bank financial institutions	65,355	*395*	(110)	*(40)*	129	(5)	—
Wholesale lending	578,894	*14,129*	(8,314)	*(5,705)*	110	(1,092)	54
Loans and advances to customers	1,057,231	*19,071*	(11,417)	*(6,931)*	391	(2,612)	409
Loans and advances to banks	83,153	—	(17)	—	22	—	—
At 31 Dec 2021	1,140,384	*19,071*	(11,434)	*(6,931)*	413	(2,612)	409

HSBC Holdings

(Audited)

Risk in HSBC Holdings is overseen by the HSBC Holdings Asset and Liability Management Committee. The major risks faced by HSBC Holdings are credit risk, liquidity risk and market risk (in the form of interest rate risk and foreign exchange risk).

Credit risk in HSBC Holdings primarily arises from transactions with Group subsidiaries and its investments in those subsidiaries.

In HSBC Holdings, the maximum exposure to credit risk arises from two components:

- financial instruments on the balance sheet (see page 332); and
- financial guarantees and similar contracts, where the maximum exposure is the maximum that we would have to pay if the guarantees were called upon (see Note 33).

In the case of our derivative balances, we have amounts with a legally enforceable right of offset in the case of counterparty default that are not included in the carrying value. These offsets also include collateral received in cash and other financial assets.

The total offset relating to our derivative balances was $3.1bn at 31 December 2022 (2021: $1.6bn).

The credit quality of loans and advances and financial investments, both of which consist of intra-Group lending and US Treasury bills and bonds, is assessed as 'strong', with 100% of the exposure being neither past due nor impaired (2021: 100%). For further details of credit quality classification, see page 146.

Treasury risk

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Overview

Treasury risk is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural or transactional foreign exchange exposures and changes in market interest rates, together with pension and insurance risk.

Treasury risk arises from changes to the respective resources and risk profiles driven by customer behaviour, management decisions or the external environment.

Approach and policy

(Audited)

Our objective in the management of treasury risk is to maintain appropriate levels of capital, liquidity, funding, foreign exchange and market risk to support our business strategy, and meet our regulatory and stress testing-related requirements.

Our approach to treasury management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment. We aim to maintain a strong capital and liquidity base to support the risks inherent in our business and invest in accordance with our strategy, meeting both consolidated and local regulatory requirements at all times.

Our policy is underpinned by our risk management framework. The risk management framework incorporates a number of measures aligned to our assessment of risks for both internal and regulatory purposes. These risks include credit, market, operational, pensions, structural and transactional foreign exchange risk, and interest rate risk in the banking book.

For further details, refer to our Pillar 3 Disclosures at 31 December 2022.

Treasury risk management

Key developments in 2022

- All of the Group's material operating entities were above regulatory minimum levels of capital, liquidity and funding at 31 December 2022.
- Our CET1 position decreased from 15.8% at 31 December 2021 to 14.2% at 31 December 2022. This included a 0.8 percentage point impact from new regulatory requirements and a 0.7 percentage point decrease from the fall in the fair value of securities.
- The Board approved a new interest rate risk in the banking book ('IRRBB') strategy in September, with the objective of increasing our stabilisation of net interest income ('NII'), with consideration given to any capital or other constraints, and then adopting a managed approach based on interest rates and outlook.
- We took steps to reduce the duration risk of the Global Treasury hold-to-collect-and-sell portfolio, which is accounted for at fair value through other comprehensive income ('FVOCI'), primarily to dampen the capital impact from rising interest rates. This risk reduction lowered the hold-to-collect-and-sell stressed value at risk ('VaR') exposure of this portfolio from $3.63bn at the end of 2021 to $2.15bn at the end of 2022. For further details of the calculation of this exposure and the use of this metric in our interest rate risk management framework, see page 215.
- We implemented a new hold-to-collect business model to better reflect our management strategy to stabilise NII. This portfolio of high-quality liquid assets will form a material part of our liquid asset buffer going forward, as well as being a hedge to our structural interest rate risk.
- We enhanced monitoring and forecasting as a result of the Russia-Ukraine war, although there were no direct material capital or liquidity impacts.
- The HBUK section of the HSBC Bank (UK) Pension Scheme's trustee funding level remained stable during the volatility in the UK gilt markets in September and October, as a result of its proactive pension scheme management, low-risk investment strategy and limited leverage in its liability-driven investment funds. Refinements relating to the scheme's inflation hedging strategy ensured continued effectiveness in the high-inflation environment.
- HSBC Overseas Holdings (UK) Limited entered into an agreement to sell its banking business in Canada to Royal Bank of Canada, subject to regulatory and governmental approvals. The transaction is expected to complete in late 2023. As a consequence of the gain on the sale and disposal of risk-weighted assets ('RWAs') from our banking business in Canada, we expect an increase of approximately 1.3 percentage points in CET1 capital before any distribution. In addition, the hedging activity in respect to this transaction reduced the full-year 2022 ratio by 0.06 percentage point. This impact will revert on completion of sale.
- HSBC Continental Europe signed a framework agreement with Promontoria MMB SAS ('My Money Group') and its subsidiary Banque des Caraïbes SA for the sale of its retail banking business in France. The sale, which is subject to regulatory and governmental approvals, is anticipated to complete in the second half of 2023. The impact of classifying the disposal as held for sale resulted in a 0.3 percentage point reduction in the Group's CET1 ratio, which will be partly offset by the reduction in RWAs upon closing.
- We identified an error in the RWA calculations of the European resolution group whereby $35bn of non-capital MREL instruments issued by the Asian and US resolution groups and held by the European resolution group were excluded from these calculations and were only deducted from MREL, whereas the relevant UK legislation requires these instruments to be both risk-weighted and deducted from MREL. In rectifying this error, we changed our treatment of $35bn of non-capital MREL investments held by the European resolution group from entities outside its group to deduct them from the European resolution group's own funds rather than from solely its MREL, allowing us to exclude them from RWAs. The change in treatment significantly reduced the European resolution group's total capital and increased its leverage ratio at 31 December 2022, although the European resolution group has no capital requirements. For further details regarding MREL, see 'Assessment and risk appetite' on page 203.
- We performed our inaugural resolvability self-assessment to meet the Bank of England requirements, which came into effect on 1 January 2022. This was incorporated into the Bank of England's publication of its findings on its first assessment of the resolvability of the eight major UK firms, as part of the Resolvability Assessment Framework.

For quantitative disclosures on capital ratios, own funds and RWAs, see pages 205 to 207. For quantitative disclosures on liquidity and funding metrics, see pages 209 to 210. For quantitative disclosures on interest rate risk in the banking book, see pages 213 to 215.

Governance and structure

The Global Head of Traded and Treasury Risk Management and Risk Analytics is the accountable risk steward for all treasury risks. The Group Treasurer is the risk owner for all treasury risks, with the exception of pension risk and insurance risk. The Group Treasurer co-owns pension risk with the Group Head of Performance, Reward and Employee Relations. Insurance risk is owned by the Chief Executive Officer for Global Insurance.

Capital risk, liquidity risk, interest rate risk in the banking book, structural foreign exchange risk and transactional foreign exchange risk are the responsibility of the Group Executive Committee and the Group Risk Committee ('GRC'). Global Treasury actively manages these risks on an ongoing basis, supported by the Holdings Asset and Liability Management Committee ('ALCO') and local ALCOs, overseen by Treasury Risk Management and Risk Management Meetings.

Pension risk is overseen by a network of local and regional pension risk management meetings. The Global Pensions Risk Management Meeting provides oversight of all pension plans sponsored by HSBC globally, and is chaired by the accountable risk steward. Insurance risk is overseen by the Global Insurance Risk Management Meeting, chaired by the Chief Risk Officer for Global Insurance.

Capital, liquidity and funding risk management processes

Assessment and risk appetite

Our capital management policy is supported by a global capital management framework. The framework sets out our approach to determining key capital risk appetites including CET1, total capital, minimum requirements for own funds and eligible liabilities ('MREL'), the leverage ratio and double leverage. Our internal capital adequacy assessment process ('ICAAP') is an assessment of the Group's capital position, outlining both regulatory and internal capital resources and requirements resulting from HSBC's business model, strategy, risk profile and management, performance and planning, risks to capital, and the implications of stress testing. Our assessment of capital adequacy is driven by an assessment of risks. These risks include credit, market, operational, pensions, insurance, structural foreign exchange, interest rate risk in the banking book and Group risk. Climate risk is also considered as part of the ICAAP, and we are continuing to develop our approach. The Group's ICAAP supports the determination of the consolidated capital risk appetite and target ratios, as well as enables the assessment and determination of capital requirements by regulators. Subsidiaries prepare ICAAPs in line with global guidance, while considering their local regulatory regimes to determine their own risk appetites and ratios.

HSBC Holdings is the provider of equity capital and MREL-eligible debt to its subsidiaries, and also provides them with non-equity capital where necessary. These investments are funded by HSBC Holdings' own equity capital and MREL-eligible debt. MREL includes own funds and liabilities that can be written down or converted into capital resources in order to absorb losses or recapitalise a bank in the event of its failure. In line with our existing structure and business model, HSBC has three resolution groups – the European resolution group, the Asian resolution group and the US resolution group. There are some smaller entities that fall outside these resolution groups.

HSBC Holdings seeks to maintain a prudent balance between the composition of its capital and its investments in subsidiaries.

As a matter of long-standing policy, the holding company retains a substantial holdings capital buffer comprising high-quality liquid assets ('HQLA'), which at 31 December 2022 was in excess of $24bn.

We aim to ensure that management has oversight of our liquidity and funding risks at Group and entity level through robust governance, in line with our risk management framework. We manage liquidity and funding risk at an operating entity level in accordance with globally consistent policies, procedures and reporting standards. This ensures that obligations can be met in a timely manner, in the jurisdiction where they fall due.

Operating entities are required to meet internal minimum requirements and any applicable regulatory requirements at all times. These requirements are assessed through our internal liquidity adequacy assessment process ('ILAAP'), which ensures that operating entities have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intra-day. The ILAAP informs the validation of risk tolerance and the setting of risk appetite. It also assesses the capability to manage liquidity and funding effectively in each major entity. These metrics are set and managed locally but are subject to robust global review and challenge to ensure consistency of approach and application of the Group's policies and controls.

Planning and performance

Capital and RWA plans form part of the annual financial resource plan that is approved by the Board. Capital and RWA forecasts are submitted to the Group Executive Committee on a monthly basis, and capital and RWAs are monitored and managed against the plan. The responsibility for global capital allocation principles rests with the Group Chief Financial Officer, supported by the Group Capital Management Meeting. This is a specialist forum addressing capital management, reporting into Holdings ALCO.

Through our internal governance processes, we seek to strengthen discipline over our investment and capital allocation decisions, and to ensure that returns on investment meet management's objectives. Our strategy is to allocate capital to businesses and entities to support growth objectives where returns above internal hurdle levels have been identified and in order to meet their regulatory and economic capital needs. We evaluate and manage business returns by using a return on average tangible equity measure.

Funding and liquidity plans also form part of the financial resource plan that is approved by the Board. The Board-level appetite measures are the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR'), together with an internal liquidity metric. In addition, we use a wider set of measures to manage an appropriate funding and liquidity profile, including legal entity depositor concentration limits, intra-day liquidity, forward-looking funding assessments and other key measures.

Risks to capital and liquidity

Outside the stress testing framework, other risks may be identified that have the potential to affect our RWAs, capital and/or liquidity position. Downside and Upside scenarios are assessed against our management objectives, and mitigating actions are assigned as necessary. We closely monitor future regulatory changes and continue to evaluate the impact of these upon our capital and liquidity requirements, particularly those related to the UK's implementation of the outstanding measures to be implemented from the Basel III reforms ('Basel 3.1').

Regulatory developments

Our capital adequacy ratios were affected by regulatory developments in 2022, including changes to internal-ratings based ('IRB') modelling requirements and the UK's implementation of the revisions to the Capital Requirements Regulation and Directive ('CRR II'). The PRA's final rules on NSFR were implemented and have been reflected in disclosures since the first quarter of 2022.

Future changes to our ratios will occur with the implementation of Basel 3.1. The PRA has published its consultation paper on the UK's implementation, with a proposed implementation date of 1 January 2025. We currently do not foresee a material net impact on our ratios from the initial implementation. The RWA output floor under Basel 3.1 is proposed to be subject to a five-year transitional provision. Any impact from the output floor would be towards the end of the transition period.

Regulatory reporting processes and controls

The quality of regulatory reporting remains a key priority for management and regulators. We are progressing with a comprehensive programme to strengthen our processes, improve consistency and enhance controls across our prudential regulatory reporting, focusing on PRA requirements initially. We commissioned a number of independent external reviews, some at the request of our regulators, including one on our credit risk RWA reporting process, which concluded in December 2022. These reviews have so far

resulted in enhancements to our RWAs and the LCR through improvements in reporting accuracy, which have been reflected in our year-end regulatory reported ratios. Our prudential regulatory reporting programme is being phased over a number of years, prioritising RWA, capital and liquidity reporting in the early stages of the programme. While this programme continues, there may be further impacts on some of our regulatory ratios, such as the CET1, LCR and NSFR, as we implement recommended changes and continue to enhance our controls across the process.

Stress testing and recovery and resolution planning

The Group uses stress testing to inform management of the capital and liquidity needed to withstand internal and external shocks, including a global economic downturn or a systems failure. Stress testing results are also used to inform risk mitigation actions, allocation of financial resources, and recovery and resolution planning, as well as to re-evaluate business plans where analysis shows capital, liquidity and/or returns do not meet their target.

In addition to a range of internal stress tests, we are subject to supervisory stress testing in many jurisdictions. These include the programmes of the Bank of England, the US Federal Reserve Board, the European Banking Authority, the European Central Bank and the Hong Kong Monetary Authority. The results of regulatory stress testing and our internal stress tests are used when assessing our internal capital and liquidity requirements through the ICAAP and ILAAP. The outcomes of stress testing exercises carried out by the PRA and other regulators feed into the setting of regulatory minimum ratios and buffers.

We maintain recovery plans for the Group and material entities, which set out potential options management could take in a range of stress scenarios that could result in a breach of capital or liquidity buffers. The Group recovery plan sets out the framework and governance arrangements to support restoring HSBC to a stable and viable position, and so lowering the probability of failure from either idiosyncratic company-specific stress or systemic market-wide issues. Our material entities' recovery plans provide detailed actions that management would consider taking in a stress scenario should their positions deteriorate and threaten to breach risk appetite and regulatory minimum levels. This is to help ensure that HSBC entities can stabilise their financial position and recover from financial losses in a stress environment.

The Group also has capabilities, resources and arrangements in place to address the unlikely event that HSBC might not be recoverable and would therefore need to be resolved by regulators. The Group performed the inaugural Resolvability Assessment Framework self-assessment during 2021 to meet the Bank of England's requirements, which came into effect on 1 January 2022.

Overall, HSBC's recovery and resolution planning helps safeguard the Group's financial and operational stability. The Group is committed to further developing its recovery and resolution capabilities, including in relation to the Bank of England's Resolvability Assessment Framework.

Measurement of interest rate risk in the banking book processes

Assessment and risk appetite

Interest rate risk in the banking book is the risk of an adverse impact to earnings or capital due to changes in market interest rates. It is generated by our non-traded assets and liabilities, specifically loans, deposits and financial instruments that are not held for trading intent or in order to hedge positions held with trading intent. Interest rate risk that can be economically hedged may be transferred to Global Treasury. Hedging is generally executed through interest rate derivatives or fixed-rate government bonds. Any interest rate risk that Global Treasury cannot economically hedge is not transferred and will remain within the global business where the risks originate.

Global Treasury uses a number of measures to monitor and control interest rate risk in the banking book, including:

- net interest income sensitivity; and
- economic value of equity sensitivity.

Net interest income sensitivity

A principal part of our management of non-traded interest rate risk is to monitor the sensitivity of expected net interest income ('NII') under varying interest rate scenarios (i.e. simulation modelling), where all other economic variables are held constant. This monitoring is undertaken at an entity level, where entities calculate both one-year and five-year NII sensitivities across a range of interest rate scenarios.

NII sensitivity figures represent the effect of pro forma movements in projected yield curves based on a static balance sheet size and structure, except for certain mortgage products where balances are impacted by interest-rate sensitive prepayments. These sensitivity calculations do not incorporate actions that would be taken by Global Treasury or in the business that originates the risk to mitigate the effect of interest rate movements.

The NII sensitivity calculations assume that interest rates of all maturities move by the same amount in the 'up-shock' scenario. The sensitivity calculations in the 'down-shock' scenarios reflect no floors to the shocked market rates. However, customer product-specific interest rate floors are recognised where applicable.

Economic value of equity sensitivity

Economic value of equity ('EVE') represents the present value of the future banking book cash flows that could be distributed to equity holders under a managed run-off scenario. This equates to the current book value of equity plus the present value of future NII in this scenario. EVE can be used to assess the economic capital required to support interest rate risk in the banking book. An EVE sensitivity represents the expected movement in EVE due to pre-specified interest rate shocks, where all other economic variables are held constant. Operating entities are required to monitor EVE sensitivities as a percentage of capital resources.

Further details of HSBC's risk management of interest rate risk in the banking book can be found in the Group's Pillar 3 Disclosures at 31 December 2022.

Other Group risks

Non-trading book foreign exchange exposures

Structural foreign exchange exposures

Structural foreign exchange exposures arise from net assets or capital investments in foreign operations, together with any associated hedging. A foreign operation is defined as a subsidiary, associate, joint arrangement or branch where the activities are conducted in a currency other than that of the reporting entity. An entity's functional reporting currency is normally that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in other comprehensive income ('OCI'). We use the US dollar as our presentation currency in our consolidated financial statements because the US dollar and currencies linked to it form the major currency bloc in which we transact and fund our business. Therefore, our consolidated balance sheet is affected by exchange differences between the US dollar and all the non-US dollar functional currencies of underlying foreign operations.

Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates. We hedge structural foreign exchange positions where it is capital efficient to do so, and subject to approved limits. This is achieved through a combination of net investment hedges and economic hedges. Hedging positions are monitored and rebalanced periodically to manage RWA or downside risks associated with HSBC's foreign currency investments.

For further details of our structural foreign exchange exposures, see page 212.

Transactional foreign exchange exposures

Transactional foreign exchange risk arises primarily from day-to-day transactions in the banking book generating profit and loss or fair value through other comprehensive income ('FVOCI') reserves in a currency other than the reporting currency of the operating entity. Transactional foreign exchange exposure generated through profit and loss is periodically transferred to Markets and Securities Services and managed within limits with the exception of limited residual foreign exchange exposure arising from timing differences or for other reasons. Transactional foreign exchange exposure generated through OCI reserves is managed by Global Treasury within agreed appetite.

HSBC Holdings risk management

As a financial services holding company, HSBC Holdings has limited market risk activities. Its activities predominantly involve maintaining sufficient capital resources to support the Group's diverse activities; allocating these capital resources across the Group's businesses; earning dividend and interest income on its investments in the businesses; payment of operating expenses; providing dividend payments to its equity shareholders and interest payments to providers of debt capital; and maintaining a supply of short-term liquid assets for deployment under extraordinary circumstances.

The main market risks to which HSBC Holdings is exposed are banking book interest rate risk and foreign currency risk. Exposure to these risks arises from short-term cash balances, funding positions held, loans to subsidiaries, investments in long-term financial assets, financial liabilities including debt capital issued, and structural foreign exchange hedges. The objective of HSBC Holdings' market risk management strategy is to manage volatility in capital resources, cash flows and distributable reserves that could be caused by movements in market parameters. Market risk for HSBC Holdings is monitored by Holdings ALCO in accordance with its risk appetite statement.

HSBC Holdings uses interest rate swaps and cross-currency interest rate swaps to manage the interest rate risk and foreign currency risk arising from its long-term debt issues. It also uses forward foreign exchange contracts to manage its structural foreign exchange exposures.

For quantitative disclosures on interest rate risk in the banking book, see pages 213 to 215.

Pension risk management processes

Our global pensions strategy is to move from defined benefit to defined contribution plans, where local law allows and it is considered competitive to do so.

In defined contribution pension plans, the contributions that HSBC is required to make are known, while the ultimate pension benefit will vary, typically with investment returns achieved by investment choices made by the employee. While the market risk to HSBC of defined contribution plans is low, the Group is still exposed to operational and reputational risk.

In defined benefit pension plans, the level of pension benefit is known. Therefore, the level of contributions required by HSBC will vary due to a number of risks, including:

- investments delivering a return below that required to provide the projected plan benefits;
- the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset values (both equity and debt);
- a change in either interest rates or inflation expectations, causing an increase in the value of plan liabilities; and
- plan members living longer than expected (known as longevity risk).

Pension risk is assessed using an economic capital model that takes into account potential variations in these factors. The impact of these variations on both pension assets and pension liabilities is assessed using a one-in-200-year stress test. Scenario analysis and other stress tests are also used to support pension risk management, including the review of de-risking opportunities.

To fund the benefits associated with defined benefit plans, sponsoring Group companies, and in some instances employees, make regular contributions in accordance with advice from actuaries and in consultation with the plan's fiduciaries where relevant. These contributions are normally set to ensure that there are sufficient funds to meet the cost of the accruing benefits for the future service of active members. However, higher contributions are required when plan assets are considered insufficient to cover the existing pension liabilities. Contribution rates are typically revised annually or once every three years, depending on the plan.

The defined benefit plans invest contributions in a range of investments designed to limit the risk of assets failing to meet a plan's liabilities. Any changes in expected returns from the investments may also change future contribution requirements. In pursuit of these long-term objectives, an overall target allocation is established between asset classes of the defined benefit plan. In addition, each permitted asset class has its own benchmarks, such as stock-market or property valuation indices or liability characteristics. The benchmarks are reviewed at least once every three to five years and more frequently if required by local legislation or circumstances. The process generally involves an extensive asset and liability review.

In addition, some of the Group's pension plans hold longevity swap contracts. These arrangements provide long-term protection to the relevant plans against costs resulting from pensioners or their dependants living longer than initially expected. The most sizeable plan to do this is the HSBC Bank (UK) Pension Scheme, which holds longevity swaps covering approximately 60% of the plan's pensioner liabilities.

Capital risk in 2022

Capital overview

Capital adequacy metrics

	At	
	31 Dec 2022	31 Dec 2021
Risk-weighted assets ('RWAs') ($bn)		
Credit risk	**679.1**	680.6
Counterparty credit risk	**37.1**	35.9
Market risk	**37.6**	32.9
Operational risk	**85.9**	88.9
Total RWAs	**839.7**	838.3
Capital on a transitional basis ($bn)		
Common equity tier 1 ('CET1') capital	**119.3**	132.6
Tier 1 capital	**139.1**	156.3
Total capital	**162.4**	177.8
Capital ratios on a transitional basis (%)		
Common equity tier 1 ratio	**14.2**	15.8
Tier 1 ratio	**16.6**	18.6
Total capital ratio	**19.3**	21.2
Capital on an end point basis ($bn)		
Common equity tier 1 ('CET1') capital	**119.3**	132.6
Tier 1 capital	**139.1**	155.0
Total capital	**157.2**	167.5
Capital ratios on an end point basis (%)		
Common equity tier 1 ratio	**14.2**	15.8
Tier 1 ratio	**16.6**	18.5
Total capital ratio	**18.7**	20.0
Liquidity coverage ratio ('LCR')[1]		
Total high-quality liquid assets ($bn)	**647.0**	688.2
Total net cash outflow ($bn)	**490.8**	495.1
LCR ratio (%)	**131.8**	139.0
Net stable funding ratio ('NSFR')[1]		
Total available stable funding ($bn)	**1,552.0**	N/A
Total required stable funding ($bn)	**1,138.4**	N/A
NSFR ratio (%)	**136.3**	N/A

1 *The LCR and NSFR ratios presented in the above table are based on average value. The LCR is the average of the preceding 12 months. The NSFR is the average of the preceding four quarters. The prior periods for LCR have been restated for consistency. We have not restated the prior periods for NSFR as no comparatives are available.*

References to EU regulations and directives (including technical standards) should, as applicable, be read as references to the UK's version of such regulation or directive, as onshored into UK law under the European Union (Withdrawal) Act 2018, and as may be subsequently amended under UK law.

Capital figures and ratios in the previous table are calculated in accordance with the revised Capital Requirements Regulation and Directive, as implemented ('CRR II'). The table presents them under the transitional arrangements in CRR II for capital instruments and after their expiry, known as the end point. The end point figures in the table above include the benefit of the regulatory transitional arrangements in CRR II for IFRS 9, which are more fully described below. Where applicable, they also reflect government relief schemes intended to mitigate the impact of the Covid-19 pandemic.

At 31 December 2022, our common equity tier 1 ('CET1') capital ratio decreased to 14.2% from 15.8% at 31 December 2021. This primarily reflected a decrease of $13.3bn in our CET1 capital. The key drivers of the fall in our CET1 ratio were:

- a 0.8 percentage point impact from new regulatory requirements, which reduced CET1 capital by $3.5bn and increased risk-weighted assets ('RWAs') by $27.1bn at implementation;
- a 0.7 percentage point decrease from a $5.6bn fall in the fair value through other comprehensive income ('FVOCI');
- a 0.4 percentage point impact from RWA growth, offset by favourable foreign currency translations; and
- a 0.3 percentage point impact from the $2.0bn impairment on the reclassification of our French retail operations to held for sale.

Profits and other movements added $4.4bn to CET1 capital and a 0.7 percentage point to the CET1 ratio. This included capital deductions for deferred tax, dividends and the share buy-back.

Our Pillar 2A requirement at 31 December 2022, as per the PRA's Individual Capital Requirement based on a point-in-time assessment, was 2.6% of RWAs, of which 1.5% was required to be met by CET1. Structural foreign exchange risk is now capitalised in RWAs under Pillar 1 and assessed for Pillar 2A in the same manner as other risks.

Own funds disclosure

(Audited)

Ref*		At 31 Dec 2022 $m	At 31 Dec 2021 $m
	Common equity tier 1 ('CET1') capital: instruments and reserves		
1	Capital instruments and the related share premium accounts	**23,406**	23,513
	– ordinary shares	**23,406**	23,513
2	Retained earnings[1]	**127,155**	121,059
3	Accumulated other comprehensive income (and other reserves)[1]	**4,105**	8,273
5	Minority interests (amount allowed in consolidated CET1)	**4,444**	4,186
5a	Independently reviewed net profits net of any foreseeable charge or dividend	**8,633**	5,887
6	**Common equity tier 1 capital before regulatory adjustments[2]**	**167,743**	162,918
28	Total regulatory adjustments to common equity tier[2]	**(48,452)**	(30,353)
29	**Common equity tier 1 capital**	**119,291**	132,565
36	Additional tier 1 capital before regulatory adjustments	**19,836**	23,787
43	Total regulatory adjustments to additional tier 1 capital	**(60)**	(60)
44	**Additional tier 1 capital**	**19,776**	23,727
45	**Tier 1 capital**	**139,067**	156,292
51	Tier 2 capital before regulatory adjustments	**24,779**	23,018
57	Total regulatory adjustments to tier 2 capital	**(1,423)**	(1,524)
58	**Tier 2 capital**	**23,356**	21,494
59	**Total capital**	**162,423**	177,786

* *The references identify lines prescribed in the Prudential Regulatory Authority ('PRA') template, which are applicable and where there is a value.*

1 *To comply with new disclosures guidance from the PRA, with effect from 1 January 2022 we report changes in 'Retained earnings' during 2022 separately in 'Accumulated other comprehensive income'. As this change has no impact on CET1 capital, we have not restated prior periods.*

2 *From 30 September 2022, investments in non-financial institution subsidiaries or participations have been measured on an equity accounting basis in compliance with UK regulatory requirements. This change increased 'Common equity tier 1 capital before regulatory adjustments' and 'Total regulatory adjustments to common equity tier' by $13.2bn, with no impact on CET1 capital as at 31 December 2022. As this change has immaterial impact on CET1 capital as at 31 December 2021, we have not restated the comparatives.*

Throughout 2022, we complied with the PRA's regulatory capital adequacy requirements, including those relating to stress testing.

Regulatory and other developments

We expect the recently announced reduction of the Hong Kong Monetary Authority's risk weight floor for residential mortgages from 25% to 15% to improve our CET1 ratio by 0.1 percentage points with effect from 1 January 2023. This reduction will be partly offset by a change to the sourcing and risk-weighting of balances we proportionally consolidate for our associates.

During 2023, our CET1 ratio will continue to be affected by strategic decisions we have taken.

Based on our capital position on 31 December 2022, we would expect that on completing the planned sale of our banking operations in Canada, branch operations in Greece, and our retail banking operations in France, we would improve our CET1 ratio by around 1.4 percentage points, net of the impact from foreign exchange hedges related to the proceeds from the planned sale of our Canada business. The exact timing and impact on our capital position of these transactions may change as the balance sheets being disposed evolve in 2023.

Risk-weighted assets

RWAs by global business

	WPB	CMB	GBM	Corporate Centre	Total
	$bn	$bn	$bn	$bn	$bn
Credit risk	149.3	307.4	146.2	76.2	679.1
Counterparty credit risk	0.9	0.7	33.8	1.7	37.1
Market risk	1.6	1.1	23.6	11.3	37.6
Operational risk	31.1	25.6	29.9	(0.7)	85.9
At 31 Dec 2022	**182.9**	**334.8**	**233.5**	**88.5**	**839.7**
At 31 Dec 2021	178.3	332.9	236.2	90.9	838.3

RWAs by geographical region

	Europe	Asia	MENA	North America	Latin America	Total
	$bn	$bn	$bn	$bn	$bn	$bn
Credit risk	180.3	330.2	49.8	87.4	31.4	679.1
Counterparty credit risk	18.9	10.4	2.7	4.2	0.9	37.1
Market risk[1]	28.2	28.6	2.6	4.2	1.2	37.6
Operational risk	23.8	40.1	5.9	10.7	5.4	85.9
At 31 Dec 2022	**251.2**	**409.3**	**61.0**	**106.5**	**38.9**	**839.7**
At 31 Dec 2021	261.1	396.3	60.2	110.4	35.9	838.3

1 *RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.*

RWA movement by global business by key driver

	Credit risk, counterparty credit risk and operational risk					
	WPB	CMB	GBM	Corporate Centre	Market risk	Total RWAs
	$bn	$bn	$bn	$bn	$bn	$bn
RWAs at 1 Jan 2022	176.6	332.0	215.9	80.9	32.9	838.3
Asset size	6.5	13.7	(3.5)	(0.6)	4.8	20.9
Asset quality	1.6	(1.1)	3.4	(0.8)	—	3.1
Model updates	(3.1)	1.0	(0.7)	(0.1)	—	(2.9)
Methodology and policy	11.6	8.9	4.7	(0.9)	(0.1)	24.2
Acquisitions and disposals	(2.0)	—	—	—	—	(2.0)
Foreign exchange movements[1]	(9.9)	(20.8)	(9.9)	(1.3)	—	(41.9)
Total RWA movement	4.7	1.7	(6.0)	(3.7)	4.7	1.4
RWAs at 31 Dec 2022	181.3	333.7	209.9	77.2	37.6	839.7

RWA movement by geographical region by key driver

	Credit risk, counterparty credit risk and operational risk						
	Europe	Asia	MENA	North America	Latin America	Market risk	Total RWAs
	$bn	$bn	$bn	$bn	$bn	$bn	$bn
RWAs at 1 Jan 2022	236.5	371.0	57.9	105.1	34.9	32.9	838.3
Asset size	1.5	3.9	3.6	1.9	5.2	4.8	20.9
Asset quality	(2.6)	7.1	—	(1.7)	0.3	—	3.1
Model updates	(3.0)	0.2	0.1	(0.2)	—	—	(2.9)
Methodology and policy	11.2	10.5	1.4	1.0	0.2	(0.1)	24.2
Acquisitions and disposals	—	—	(0.2)	(1.8)	—	—	(2.0)
Foreign exchange movements[1]	(20.6)	(12.0)	(4.4)	(2.0)	(2.9)	—	(41.9)
Total RWA movement	(13.5)	9.7	0.5	(2.8)	2.8	4.7	1.4
RWAs at 31 Dec 2022	223.0	380.7	58.4	102.3	37.7	37.6	839.7

1 *Foreign exchange movements in this disclosure are computed by retranslating the RWAs into US dollars for non-US dollar branches, subsidiaries, joint ventures and associates.*

Risk-weighted assets ('RWAs') rose by $1.4bn during the year. An increase of $43.3bn, driven by regulatory change and lending growth, was partly offset by a decrease of $41.9bn due to favourable foreign currency translation differences. At 31 December 2022, our cumulative RWA saves as part of our transformation programme were $128bn.

Asset size

The $20.9bn increase in RWAs due to asset size movement included an increase of $4.8bn in market risk RWAs, mostly attributable to heightened market risk volatility, and an increase in transactional and structural foreign exchange exposures. The $13.7bn increase in CMB RWAs reflected corporate loan growth in Europe, Asia and North America.

GBM RWAs fell by $3.5bn due to a reduction in counterparty credit risk of $2.8bn, driven by mark-to-market movements and management initiatives. Lower lending in Europe further reduced RWAs, which was partly offset by growth in Asia and Latin America.

WPB RWAs increased by $6.5bn, primarily due to lending growth in Asia and Latin America, largely in term lending and the mortgage portfolio.

Asset quality

The increase of $3.1bn RWAs was mostly driven by credit migration, primarily in Europe and Asia and partly offset against portfolio mix changes.

Model updates

The $3.1bn RWA decrease in WPB was mostly due to the implementation of a credit card model in Hong Kong and a retail model in France. A reduction of $1.6bn RWAs in GBM was driven by the introduction of a counterparty credit risk equity model in Europe. This was mostly offset by a $2.1bn increase in RWAs in GBM and CMB due to a commercial property loan model in Asia.

Methodology and policy

The $24.2bn increase in RWAs was driven by the regulatory changes of $27.1bn for revised IRB modelling requirements and the UK's implementation of the CRR II rules.

These increases were partly offset by reductions predominantly due to data enhancements driven by internal and external reviews of our regulatory reporting processes, and the reversal of the beneficial changes to the treatment of software assets in Corporate Centre.

Acquisitions and disposals

The $2.0bn RWA decrease was mainly due to the $1.8bn sale of WPB retail branches in US.

Leverage ratio[1]

	At	
	31 Dec 2022	31 Dec 2021
	$bn	$bn
Tier 1 capital	**139.1**	155.0
Total leverage ratio exposure	**2,417.2**	2,962.7
	%	%
Leverage ratio	**5.8**	5.2

1 *The CRR II regulatory transitional arrangements for IFRS 9 are applied in the leverage ratio calculation. This calculation is in line with the UK leverage rules that were implemented on 1 January 2022, and excludes central bank claims. Comparatives for 2021 are reported based on the disclosure rules in force at that time, and include claims on central banks.*

Our leverage ratio was 5.8% at 31 December 2022, up from 5.2% at 31 December 2021. The improvement was mainly due to the exclusion of central bank claims following the implementation of the UK leverage ratio framework from 1 January 2022, and foreign exchange translation movement. This was partly offset by a decline in tier 1 capital.

At 31 December 2022, our UK minimum leverage ratio requirement of 3.25% was supplemented by a leverage ratio buffer of 0.8%, which consists of an additional leverage ratio buffer of 0.7% and a countercyclical leverage ratio buffer of 0.1%. These buffers translated into capital values of $16.9bn and $2.4bn respectively. We exceeded these leverage requirements.

Regulatory transitional arrangements for IFRS 9 'Financial Instruments'

We have adopted the regulatory transitional arrangements in CRR II for IFRS 9, including paragraph four of article 473a. Our capital and ratios are presented under these arrangements throughout the tables in this section, including in the end point figures. Without their application, our CET1 ratio would be 14.2%.

The IFRS 9 regulatory transitional arrangements allow banks to add back to their capital base a proportion of the impact that IFRS 9 has upon their loan loss allowances. The impact is defined as:

- the increase in loan loss allowances on day one of IFRS 9 adoption; and
- any subsequent increase in ECL in the non-credit-impaired book thereafter.

Any add-back must be tax affected and accompanied by a recalculation of deferred tax, exposure and RWAs. The impact is calculated separately for portfolios using the standardised ('STD') and internal ratings-based ('IRB') approaches. For IRB portfolios, there is no add-back to capital unless loan loss allowances exceed regulatory 12-month expected losses.

The EU's CRR 'Quick Fix' relief package increased the 2022 scalar from 25% to 75% the relief that banks may take for loan loss allowances recognised since 1 January 2020 on the non-credit-impaired book.

In the current period, the add-back to CET1 capital amounted to $0.4bn under the STD approach with a tax impact of $0.1bn. At 31 December 2021, the add-back to the capital base under the STD approach was $1.0bn with a tax impact of $0.2bn.

Pillar 3 disclosure requirements

Pillar 3 of the Basel regulatory framework is related to market discipline and aims to make financial services firms more transparent by requiring publication of wide-ranging information on their risks, capital and management. Our *Pillar 3 Disclosures at 31 December 2022* is published on our website at www.hsbc.com/investors.

Liquidity and funding risk in 2022

Liquidity metrics

At 31 December 2022, all of the Group's material operating entities were above regulatory minimum liquidity and funding levels.

Each entity maintains sufficient unencumbered liquid assets to comply with local and regulatory requirements. The liquidity value of these assets for each entity is shown in the following table, along with the individual LCR ratio on a local regulatory requirements basis wherever applicable. Where local regulatory requirements are not applicable, the PRA LCR is shown. The local basis may differ from PRA measures due to differences in the way regulators have implemented the Basel III standards.

Each entity maintains a sufficient stable funding profile and is assessed using the NSFR or other appropriate metrics.

In addition to regulatory metrics, we use a wide set of measures to manage our liquidity and funding profile.

The Group liquidity and funding position on an average basis is analysed in the following sections.

Operating entities' liquidity[1]

	At 31 December 2022			
	LCR	**HQLA**	**Net outflows**	**NSFR**
	%	**$bn**	**$bn**	**%**
HSBC UK Bank plc (ring-fenced bank)[2]	**226**	**136**	**60**	**164**
HSBC Bank plc (non-ring-fenced bank)[3,4]	**143**	**128**	**90**	**115**
The Hongkong and Shanghai Banking Corporation – Hong Kong branch[5]	**179**	**147**	**82**	**130**
HSBC Singapore[6]	**247**	**21**	**9**	**173**
Hang Seng Bank	**228**	**50**	**22**	**156**
HSBC Bank China	**183**	**23**	**13**	**132**
HSBC Bank USA	**164**	**85**	**52**	**131**
HSBC Continental Europe [7,8]	**151**	**55**	**37**	**132**
HSBC Bank Middle East Ltd – UAE branch	**239**	**12**	**5**	**158**
HSBC Canada[7]	**149**	**22**	**15**	**122**
HSBC Mexico	**155**	**8**	**5**	**129**
	At 31 December 2021			
HSBC UK Bank plc (ring-fenced bank)[2]	222	143	64	176
HSBC Bank plc (non-ring-fenced bank)[3,4]	142	118	84	115
The Hongkong and Shanghai Banking Corporation – Hong Kong branch[5]	190	139	74	136
HSBC Singapore[6]	277	19	7	165
Hang Seng Bank	200	48	24	145
HSBC Bank China	155	23	15	143
HSBC Bank USA	169	104	62	145
HSBC Continental Europe[7]	142	56	39	131
HSBC Bank Middle East Ltd – UAE branch	203	12	6	154
HSBC Canada[7]	154	25	16	125
HSBC Mexico	210	9	4	138

1 *The LCR and NSFR ratios presented in the above table are based on average values. The LCR is the average of the preceding 12 months. The NSFR is the average of the preceding four quarters. Prior period numbers have been restated for consistency.*
2 *HSBC UK Bank plc refers to the HSBC UK liquidity group, which comprises four legal entities: HSBC UK Bank plc, Marks and Spencer Financial Services plc, HSBC Private Bank (UK) Ltd and HSBC Trust Company (UK) Limited, managed as a single operating entity, in line with the application of UK liquidity regulation as agreed with the PRA.*
3 *HSBC Bank plc includes overseas branches and special purpose entities consolidated by HSBC for financial statements purposes.*
4 *HSBC Bank plc implemented a strategic data enhancement that resulted in a reclassification of some securities. This reclassification drove a reduction in total HQLA and corresponding LCR as of 31 December 2022. Prior period numbers have been restated for consistency.*
5 *The Hongkong and Shanghai Banking Corporation – Hong Kong branch represents the material activities of The Hongkong and Shanghai Banking Corporation Limited.*
6 *HSBC Singapore includes HSBC Bank Singapore Limited and The Hongkong and Shanghai Banking Corporation – Singapore branch. Liquidity and funding risk is monitored and controlled at country level in line with the local regulator's approval. Prior period numbers have been restated for consistency.*
7 *HSBC Continental Europe and HSBC Canada represent the consolidated banking operations of the Group in France and Canada, respectively. HSBC Continental Europe and HSBC Canada are each managed as single distinct operating entities for liquidity purposes.*
8 *In response to the requirement for an intermediate parent undertaking in line with EU Capital Requirements Directive ('CRD V'), HSBC Continental Europe acquired control of HSBC Germany and HSBC Bank Malta on 30 November 2022. The averages for LCR and NSFR includes the impact of the inclusion of two entities for November 2022 and December 2022.*

Consolidated liquidity metrics

Net stable funding ratio

From 1 January 2022, we started managing funding risk based on the PRA's NSFR rules. The Group's NSFR at 31 December 22, calculated from the average of the four preceding quarters average, was 136%.

	At[1]		
	31 Dec 2022 $bn	30 Jun 2022 $bn	31 Dec 2021 $bn
Total available stable funding ($bn)	**1,552**	1,567	N/A
Total required stable funding ($bn)	**1,138**	1,139	N/A
NSFR ratio (%)	**136**	138	N/A

1 *Group NSFR numbers above are based on average values. The NSFR number is the average of the preceding quarters.*

Liquidity coverage ratio

At 31 December 2022, the average HQLA held at entity level amounted to $812bn (31 December 2021: $861bn). Since 2021, we have implemented a revised approach to the application of the requirements under the European Commission Delegated Regulation (EU) 2015/61 and PRA rule book. This revised approach was used to reflect the impact of limitations in the transferability of entity liquidity around the Group, and resulted in an adjustment of $165bn to LCR HQLA and $9bn to LCR inflows on an average basis. The change in methodology was designed to better incorporate local regulatory restrictions on the transferability of liquidity.

	At[1]		
	31 Dec 2022 $bn	30 Jun 2022 $bn	31 Dec 2021 $bn
High-quality liquid assets (in entities)	**812**	848	861
EC Delegated Act adjustment for transfer restrictions[2]	**(174)**	(181)	(176)
Group LCR HQLA	**647**	676	688
Net outflows	**491**	500	495
Liquidity coverage ratio	**132%**	135%	139%

1 *Group LCR numbers above are based on average values. The LCR is the average of the preceding 12 months.*
2 *This includes adjustments made to high-quality liquid assets and inflows in entities to reflect liquidity transfer restrictions.*

Liquid assets

After the $165bn adjustment, the average Group LCR HQLA of $647bn (31 December 2021: $688bn) was held in a range of asset classes and currencies. Of these, 97% were eligible as level 1 (31 December 2021: 93%).

The following tables reflect the composition of the average liquidity pool by asset type and currency at 31 December 2022.

Liquidity pool by asset type[1]

	Liquidity pool $bn	**Cash $bn**	**Level 1[2] $bn**	**Level 2[2] $bn**
Cash and balance at central bank	**344**	**344**	**—**	**—**
Central and local government bonds	**288**	**—**	**272**	**16**
Regional government public sector entities	**2**	**—**	**2**	**—**
International organisation and multilateral developments banks	**9**	**—**	**9**	**—**
Covered bonds	**2**	**—**	**—**	**2**
Other	**2**	**—**	**1**	**1**
Total at 31 Dec 2022	**647**	**344**	**284**	**19**
Total at 31 Dec 2021	688	390	251	47

1 *Group liquid assets numbers are based on average values.*
2 *As defined in EU regulations, level 1 assets means 'assets of extremely high liquidity and credit quality', and level 2 assets means 'assets of high liquidity and credit quality'.*

Liquidity pool by currency[1]

	$ $bn	**£ $bn**	**€ $bn**	**HK$ $bn**	**Other $bn**	**Total $bn**
Liquidity pool at 31 Dec 2022	**167**	**191**	**98**	**54**	**137**	**647**
Liquidity pool at 31 Dec 2021	176	206	117	67	122	688

1 *Group liquid assets numbers are based on average values.*

Sources of funding

Our primary sources of funding are customer current accounts and savings deposits payable on demand or at short notice. We issue secured and unsecured wholesale securities to supplement customer deposits, meet regulatory obligations and to change the currency mix, maturity profile or location of our liabilities.

The following 'Funding sources' and 'Funding uses' tables provide a view of how our consolidated balance sheet is funded. In practice, all the principal operating entities are required to manage liquidity and funding risk on a stand-alone basis.

The tables analyse our consolidated balance sheet according to the assets that primarily arise from operating activities and the sources of funding primarily supporting these activities. Assets and liabilities that do not arise from operating activities are presented at a net balancing source or deployment of funds.

Funding sources

(Audited)

	2022 $m	2021 $m
Customer accounts	**1,570,303**	1,710,574
Deposits by banks	**66,722**	101,152
Repurchase agreements – non-trading	**127,747**	126,670
Debt securities in issue	**78,149**	78,557
Cash collateral, margin and settlement accounts	**88,468**	65,452
Liabilities of disposal groups held for sale[1]	**114,597**	9,005
Subordinated liabilities	**22,290**	20,487
Financial liabilities designated at fair value	**127,327**	145,502
Liabilities under insurance contracts	**114,844**	112,745
Trading liabilities	**72,353**	84,904
– repos	**16,254**	11,004
– stock lending	**3,541**	2,332
– other trading liabilities	**52,558**	71,568
Total equity	**196,028**	206,777
Other balance sheet liabilities	**387,702**	296,114
At 31 Dec	**2,966,530**	2,957,939

Funding uses

(Audited)

	2022 $m	2021 $m
Loans and advances to customers	**924,854**	1,045,814
Loans and advances to banks	**104,882**	83,136
Reverse repurchase agreements – non-trading	**253,754**	241,648
Cash collateral, margin and settlement accounts	**82,986**	59,884
Assets held for sale[1]	**115,919**	3,411
Trading assets	**218,093**	248,842
– reverse repos	**14,797**	14,994
– stock borrowing	**10,706**	8,082
– other trading assets	**192,590**	225,766
Financial investments	**425,564**	446,274
Cash and balances with central banks	**327,002**	403,018
Other balance sheet assets	**513,476**	425,912
At 31 Dec	**2,966,530**	2,957,939

1 *'Liabilities of disposal groups held for sale' includes $85bn and $27bn and 'Assets held for sale' includes $90bn and $23bn, in respect of planned sale of our banking business in Canada and planned sale of our retail banking operations in France respectively, that were classified as assets held for sale during 2022.*

Wholesale term debt maturity profile

The maturity profile of our wholesale term debt obligations is set out in the following table. The balances in the table are not directly comparable with those in the consolidated balance sheet because the table presents gross cash flows relating to principal payments and not the balance sheet carrying value, which includes debt securities and subordinated liabilities measured at fair value.

Wholesale funding cash flows payable by HSBC under financial liabilities by remaining contractual maturities[1]

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Debt securities issued	**11,959**	**11,266**	**12,532**	**8,225**	**8,212**	**26,669**	**52,435**	**52,952**	**184,250**
– unsecured CDs and CP	**3,821**	**6,017**	**7,088**	**4,137**	**3,123**	**1,264**	**707**	**1,004**	**27,161**
– unsecured senior MTNs	**5,973**	**2,351**	**3,534**	**1,363**	**3,238**	**19,229**	**44,023**	**44,021**	**123,732**
– unsecured senior structured notes	**1,264**	**1,421**	**1,247**	**1,850**	**1,627**	**4,463**	**2,609**	**5,990**	**20,471**
– secured covered bonds	**—**	**—**	**—**	**—**	**—**	**—**	**602**	**—**	**602**
– secured asset-backed commercial paper	**690**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**690**
– secured ABS	**15**	**28**	**40**	**38**	**36**	**123**	**656**	**220**	**1,156**
– others	**196**	**1,449**	**623**	**837**	**188**	**1,590**	**3,838**	**1,717**	**10,438**
Subordinated liabilities	**—**	**—**	**11**	**160**	**—**	**2,000**	**5,581**	**25,189**	**32,941**
– subordinated debt securities	**—**	**—**	**11**	**160**	**—**	**2,000**	**5,581**	**23,446**	**31,198**
– preferred securities	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**1,743**	**1,743**
At 31 Dec 2022	**11,959**	**11,266**	**12,543**	**8,385**	**8,212**	**28,669**	**58,016**	**78,141**	**217,191**
Debt securities issued	17,602	14,593	9,293	9,249	5,233	25,058	55,388	56,639	193,055
– unsecured CDs and CP	4,586	6,795	4,281	2,837	1,189	947	834	931	22,400
– unsecured senior MTNs	8,542	4,140	2,633	2,078	2,074	14,932	45,063	45,259	124,721
– unsecured senior structured notes	2,090	1,610	1,017	975	1,206	2,996	3,382	8,604	21,880
– secured covered bonds	—	1,137	—	997	—	2,417	1,997	—	6,548
– secured asset-backed commercial paper	956	—	—	—	—	—	—	—	956
– secured ABS	1	133	33	31	193	896	1,696	98	3,081
– others	1,427	778	1,329	2,331	571	2,870	2,416	1,747	13,469
Subordinated liabilities	—	—	11	—	—	417	7,023	21,274	28,725
– subordinated debt securities	—	—	11	—	—	417	7,023	19,427	26,878
– preferred securities	—	—	—	—	—	—	—	1,847	1,847
At 31 Dec 2021	17,602	14,593	9,304	9,249	5,233	25,475	62,411	77,913	221,780

1 *Excludes financial liabilities of disposal groups.*

Structural foreign exchange risk in 2022

Structural foreign exchange exposures represent net assets or capital investments in subsidiaries, branches, joint arrangements or associates, together with any associated hedges, the functional currencies of which are currencies other than the US dollar. Exchange differences on structural exposures are usually recognised in 'other comprehensive income'.

Net structural foreign exchange exposures

	2022					
Currency of structural exposure	**Net investment in foreign operations (excl non-controlling interest)** $m	**Net investment hedges** $m	**Structural foreign exchange exposures (pre-economic hedges)** $m	**Economic hedges – structural FX hedges[1]** $m	**Economic hedges – equity securities (AT1)[2]** $m	**Net structural foreign exchange exposures** $m
Hong Kong dollars	**47,204**	**(4,597)**	**42,607**	**(8,363)**	**—**	**34,244**
Pounds sterling	**39,535**	**(14,000)**	**25,535**	**—**	**(1,205)**	**24,330**
Chinese renminbi	**35,801**	**(3,532)**	**32,269**	**(994)**	**—**	**31,275**
Euros	**15,182**	**(777)**	**14,405**	**—**	**(2,402)**	**12,003**
Canadian dollars	**4,402**	**(811)**	**3,591**	**—**	**—**	**3,591**
Indian rupees	**4,967**	**(1,380)**	**3,587**	**—**	**—**	**3,587**
Mexican pesos	**3,989**	**—**	**3,989**	**—**	**—**	**3,989**
Saudi riyals	**4,182**	**(109)**	**4,073**	**—**	**—**	**4,073**
UAE dirhams	**4,534**	**(731)**	**3,803**	**(2,285)**	**—**	**1,518**
Malaysian ringgit	**2,715**	**—**	**2,715**	**—**	**—**	**2,715**
Singapore dollars	**3,108**	**(358)**	**2,750**	**—**	**(559)**	**2,191**
Australian dollars	**2,264**	**—**	**2,264**	**—**	**—**	**2,264**
Taiwanese dollars	**2,058**	**(1,140)**	**918**	**—**	**—**	**918**
Indonesian rupiah	**1,453**	**(469)**	**984**	**—**	**—**	**984**
Swiss francs	**1,233**	**(727)**	**506**	**—**	**—**	**506**
Korean won	**1,283**	**(817)**	**466**	**—**	**—**	**466**
Thai baht	**908**	**—**	**908**	**—**	**—**	**908**
Egyptian pound	**746**	**—**	**746**	**—**	**—**	**746**
Qatari rial	**785**	**(200)**	**585**	**(277)**	**—**	**308**
Argentinian peso	**968**	**—**	**968**	**—**	**—**	**968**
Others, each less than $700m	**5,135**	**(495)**	**4,640**	**(36)**	**—**	**4,604**
At 31 Dec	**182,452**	**(30,143)**	**152,309**	**(11,955)**	**(4,166)**	**136,188**
	2021					
Hong Kong dollars	44,714	(4,992)	39,722	(7,935)	—	31,787
Pounds sterling	47,935	(15,717)	32,218	—	(1,353)	30,865
Chinese renminbi	35,879	—	35,879	(1,255)	—	34,624
Euros	14,671	—	14,671	—	(4,262)	10,409
Canadian dollars	5,147	(1,093)	4,054	—	—	4,054
Indian rupees	5,106	—	5,106	—	—	5,106
Mexican pesos	3,598	—	3,598	—	—	3,598
Saudi riyals	4,115	—	4,115	—	—	4,115
UAE dirhams	4,155	(700)	3,455	(1,985)	—	1,470
Malaysian ringgit	2,713	—	2,713	—	—	2,713
Singapore dollars	2,339	(680)	1,659	—	(1,298)	361
Australian dollars	2,300	—	2,300	—	—	2,300
Taiwanese dollars	2,105	(1,019)	1,086	—	—	1,086
Indonesian rupiah	1,748	—	1,748	—	—	1,748
Swiss francs	1,107	(809)	298	—	—	298
Korean won	1,219	(696)	523	—	—	523
Thai baht	859	—	859	—	—	859
Egyptian pound	1,051	—	1,051	—	—	1,051
Qatari rial	725	—	725	(332)	—	393
Argentinian peso	795	—	795	—	—	795
Others, each less than $700m	5,242	(200)	5,042	(36)	—	5,006
At 31 Dec	187,523	(25,906)	161,617	(11,543)	(6,913)	143,161

1 *Represents hedges that do not qualify as net investment hedges for accounting purposes.*
2 *Represents foreign currency-denominated preference share and AT1 instruments. These are accounted for at historical cost under IFRSs and do not qualify as net investment hedges for accounting purposes. The gain or loss arising from changes in the US dollar value of these instruments is recognised on redemption in retained earnings.*

For definition of structural foreign exchange exposures, see page 205.

Interest rate risk in the banking book in 2022

Net interest income sensitivity

The following tables set out the assessed impact to a hypothetical base case projection of our banking book NII under the following scenarios:

- an immediate shock of 25 basis points ('bps') to the current market-implied path of interest rates across all currencies on 1 January 2023 (effects over one year and five years); and
- an immediate shock of 100bps to the current market-implied path of interest rates across all currencies on 1 January 2023 (effects over one year and five years).

The sensitivities shown represent a hypothetical simulation of the base case NII, assuming a static balance sheet (specifically no assumed migration from current account to term deposits), no management actions from Global Treasury and a simplified 50% pass-on assumption applied for material entities. This also incorporates the effect of interest rate behaviouralisation, hypothetical managed rate product pricing assumptions, prepayment of mortgages and deposit stability. The sensitivity calculations exclude pensions, insurance and investments in subsidiaries.

The NII sensitivity analysis performed in the case of a down-shock does not include floors to market rates, and it does not include floors on some wholesale assets and liabilities. However, floors have been maintained for deposits and loans to customers where this is contractual or where negative rates would not be applied.

As market and policy rates move, the degree to which these changes are passed on to customers will vary based on a number of factors, including the absolute level of market rates, regulatory and contractual frameworks, and competitive dynamics. To aid comparability between markets, we have simplified the basis of preparation for our disclosure, and have used a 50% pass-on assumption for major entities on certain interest bearing deposits. Our pass-through asset assumptions are largely in line with our contractual agreements or established market practice, which typically results in a significant portion of interest rate changes being passed on.

The one-year and five-year NII sensitivities in the down-shock scenarios decreased at 31 December 2022 at Group level when compared with 31 December 2021. This was driven by changes in the forecasted yield curves and changes in balance sheet composition.

Immediate interest rate rises of 25bps and 100bps would increase projected NII for the 12 months to 31 December 2023 by $884m and $3,535m, respectively. Immediate interest rate falls of 25bps and 100bps would decrease projected NII for the 12 months to 31 December 2023 by $973m and $3,969m, respectively.

The sensitivity of NII for 12 months decreased by $1,879m in the plus 100bps parallel shock and by $1,792m in the minus 100bps parallel shock, comparing 31 December 2022 with 31 December 2021. The decrease in the sensitivity of NII for 12 months in the plus 100bps parallel shock was mainly driven by changes in market pricing, reflecting current market expectations of main policy rates. The key drivers of the reduction in NII sensitivity are the reduced effects of flooring as rates have moved higher, deposit migration, and management actions.

The sensitivities broken down by currency in the tables below do not include the impact of vanilla foreign exchange swaps to optimise cash management across the Group.

For further details of measurement of interest rate risk in the banking book, see page 204.

NII sensitivity to an instantaneous change in yield curves (12 months) – 1 year NII sensitivity by currency

	Currency					
	$	HK$	£	€	Other	Total
	$m	$m	$m	$m	$m	$m
Change in Jan 2023 to Dec 2023 (based on balance sheet at 31 December 2022)						
+25bps parallel	**(66)**	**107**	**245**	**167**	**431**	**884**
-25bps parallel	**64**	**(115)**	**(289)**	**(194)**	**(439)**	**(973)**
+100bps parallel	**(267)**	**413**	**1,026**	**674**	**1,689**	**3,535**
-100bps parallel	**236**	**(476)**	**(1,177)**	**(765)**	**(1,787)**	**(3,969)**
Change in Jan 2022 to Dec 2022 (based on balance sheet at 31 December 2021)						
+25bps parallel	125	265	420	106	393	1,309
-25bps parallel	(257)	(536)	(594)	(170)	(395)	(1,952)
+100bps parallel	458	1,054	1,739	632	1,532	5,414
-100bps parallel	(466)	(1,020)	(2,070)	(595)	(1,610)	(5,761)

NII sensitivity to an instantaneous change in yield curves (5 years) – Cumulative 5 years NII sensitivity by currency

	Currency					
	$	HK$	£	€	Other	Total
	$m	$m	$m	$m	$m	$m
Change in Jan 2023 to Dec 2027 (based on balance sheet at 31 December 2022)						
+25bps parallel	**192**	**668**	**2,315**	**924**	**2,500**	**6,599**
-25bps parallel	**(282)**	**(688)**	**(2,336)**	**(1,044)**	**(2,498)**	**(6,848)**
+100bps parallel	**673**	**2,401**	**9,254**	**3,764**	**9,765**	**25,857**
-100bps parallel	**(1,522)**	**(3,004)**	**(9,454)**	**(4,173)**	**(10,317)**	**(28,470)**
Change in Jan 2022 to Dec 2026 (based on balance sheet at 31 December 2021)						
+25bps parallel	1,026	1,410	3,333	827	2,510	9,106
-25bps parallel	(1,701)	(2,887)	(4,216)	(997)	(2,600)	(12,401)
+100bps parallel	3,922	4,870	13,389	3,919	9,841	35,941
-100bps parallel	(5,060)	(7,052)	(14,893)	(3,571)	(10,481)	(41,057)

The net interest income sensitivities arising from the scenarios presented in the tables above are not directly comparable. This is due to timing differences relating to interest rate changes and the repricing of assets and liabilities.

NII sensitivity to an instantaneous change in yield curves (5 years) – NII sensitivity by years

	Year 1 $m	Year 2 $m	Year 3 $m	Year 4 $m	Year 5 $m	Total $m
Change in Jan 2023 to Dec 2027 (based on balance sheet at 31 December 2022)						
+25bps parallel	**884**	**1,145**	**1,378**	**1,550**	**1,642**	**6,599**
-25bps parallel	**(973)**	**(1,178)**	**(1,420)**	**(1,579)**	**(1,699)**	**(6,848)**
+100bps parallel	**3,535**	**4,565**	**5,367**	**5,962**	**6,429**	**25,857**
-100bps parallel	**(3,969)**	**(4,944)**	**(5,925)**	**(6,565)**	**(7,067)**	**(28,470)**
Change in Jan 2022 to Dec 2026 (based on balance sheet at 31 December 2021)						
+25bps parallel	1,309	1,758	1,896	2,002	2,141	9,106
-25bps parallel	(1,952)	(2,324)	(2,593)	(2,687)	(2,845)	(12,401)
+100bps parallel	5,414	6,738	7,492	7,937	8,359	35,941
-100bps parallel	(5,761)	(7,664)	(8,675)	(9,354)	(9,603)	(41,057)

Non-trading value at risk

Non-trading portfolios comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments measured at fair value through other comprehensive income, debt instruments measured at amortised cost, and exposures arising from our insurance operations.

Value at risk of non-trading portfolios

Value at risk ('VaR') is a technique for estimating potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into the market risk management of non-trading portfolios to have a complete picture of risk, complementing risk sensitivity analysis.

Our models are predominantly based on historical simulation that incorporates the following features:

- historical market rates and prices, which are calculated with reference to interest rates, credit spreads and the associated volatilities;
- potential market movements that are calculated with reference to data from the past two years; and
- calculations to a 99% confidence level and using a one-day holding period.

Although a valuable guide to risk, VaR is used for non-trading portfolios with awareness of its limitations. For example:

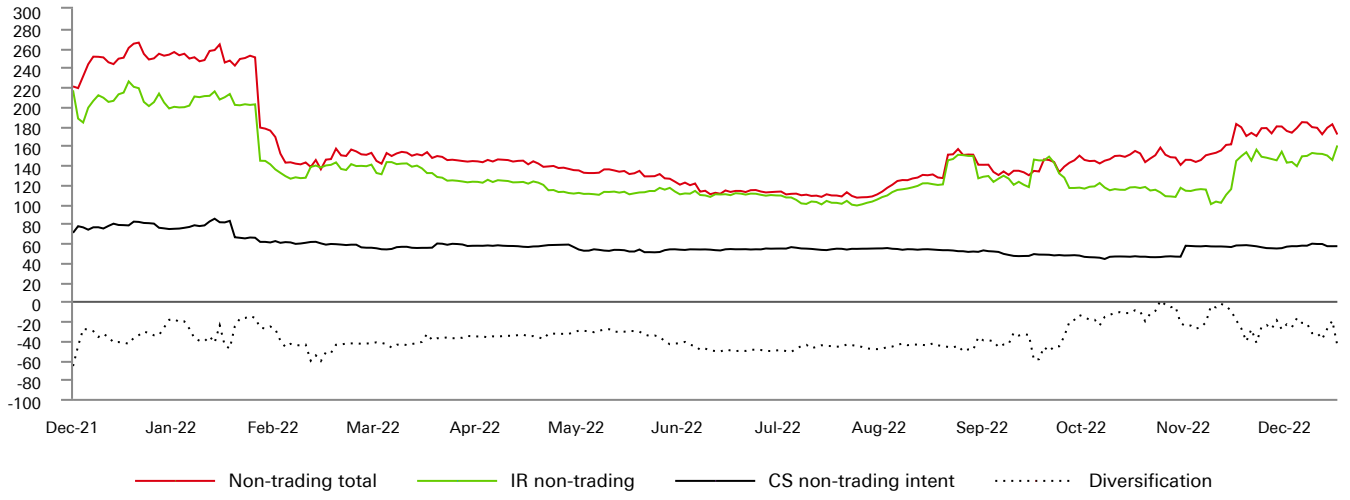
- The use of historical data as a proxy for estimating future market moves may not encompass all potential market events, particularly those that are extreme in nature. As the model is calibrated on the last 500 business days, it does not adjust instantaneously to a change in the market regime.
- The use of a one-day holding period for risk management purposes of non-trading books is only an indication of exposure and not indicative of the time period required to hedge or liquidate positions.
- The use of a 99% confidence level by definition does not take into account losses that might occur beyond this level of confidence.

The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included in the Group non-trading VaR. The management of this risk is described on page 217. Non-trading VaR also excludes the equity risk on securities held at fair value and non-trading book foreign exchange risk.

The VaR for non-trading activity at 31 December 2022 was lower than at 31 December 2021.

The daily levels of total non-trading VaR in 2022 are set out in the graph below.

Daily VaR (non-trading portfolios), 99% 1 day ($m)



The Group non-trading VaR for 2022 is shown in the table below.

Non-trading VaR, 99% 1 day

(Audited)

	Interest rate $m	Credit spread $m	Portfolio diversification[1] $m	Total[2] $m
Balance at 31 Dec 2022	**159.8**	**56.6**	**(45.3)**	**171.1**
Average	**134.6**	**56.9**	**(35.9)**	**155.6**
Maximum	**225.5**	**84.7**		**265.3**
Minimum	**98.3**	**43.4**		**106.3**
Balance at 31 Dec 2021	216.4	70.3	(66.3)	220.4
Average	200.7	76.9	(40.3)	237.3
Maximum	248.7	99.3	—	298.8
Minimum	163.3	64.7	—	193.5

1 *Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types – such as interest rate and credit spreads – together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occurs on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.*

2 *The total VaR is non-additive across risk types due to diversification effects.*

The decrease at the end of February was primarily driven by Covid-19 scenarios moving out of the two-year historical scenario window used to calculate VaR. Non-trading VaR remained at relatively low levels throughout the next two quarters, with an increase in duration risk exposure in Global Treasury during November driving an increase in both interest rate and total VaR. The average portfolio diversification effect between interest rate and credit spread exposure remained relatively stable between 2021 and 2022.

Sensitivity of capital and reserves

Hold-to-collect-and-sell stressed VaR is a quantification of the potential losses to a 99% confidence level of the portfolio of high-quality liquid assets held under a hold-to-collect-and-sell business model in Global Treasury. The portfolio is accounted for at fair value through other comprehensive income together with the derivatives held in designated hedging relationships with these securities. The mark-to-market of this portfolio therefore has an impact on CET1. Stressed VaR is quantified based on the worst losses over a one-year period going back to the beginning of 2007 and the assumed holding period is 60 days. At the end of December 2022, the stressed VaR of the portfolio was $2.15bn (2021: $3.63bn). The decrease was primarily due to actions taken to reduce the overall duration risk of the portfolio in order to dampen the capital impact from higher interest rates.

Alongside our monitoring of the stressed VaR of this portfolio, we also monitor the sensitivity of reported cash flow hedging reserves to interest rate movements on a yearly basis by assessing the expected reduction in valuation of cash flow hedges due to parallel movements of plus or minus 100bps in all yield curves.

The following table describes the sensitivity of our cash flow hedge reported reserves to the stipulated movements in yield curves at the year end. The sensitivities are indicative and based on simplified scenarios. These particular exposures form only a part of our overall interest rate exposure. We apply flooring on negative rates in the minus 100bps scenario in this assessment. However, due to increases in interest rates in most major markets, the effect of this flooring is immaterial at the end of 2022.

Comparing 31 December 2022 with 31 December 2021, the sensitivity of the cash flow hedging reserve increased by $368m in the plus 100bps scenario and increased by $375m in the minus 100bps scenario. Although our largest exposure by currency remained fixed rate pound sterling hedges transacted in HSBC UK Bank plc, the increase in sensitivity during 2022 was driven by increases in hedge exposure in a variety of other currencies including US dollars and Hong Kong dollars.

Sensitivity of cash flow hedging reported reserves to interest rate movements

	$m
At 31 Dec 2022	
+100 basis point parallel move in all yield curves	**(1,899)**
As a percentage of total shareholders' equity	**(1.01)%**
-100 basis point parallel move in all yield curves	**1,912**
As a percentage of total shareholders' equity	**1.02%**
At 31 Dec 2021	
+100 basis point parallel move in all yield curves	(1,531)
As a percentage of total shareholders' equity	(0.77)%
-100 basis point parallel move in all yield curves	1,537
As a percentage of total shareholders' equity	0.78%

Third-party assets in Markets Treasury

Third-party assets in Markets Treasury decreased by 3% compared with 31 December 2021. The net decrease of $22bn was partly reflective of a reduction in our commercial surplus during the year, as well as the impact of foreign exchange rates and interest rates, as central banks tightened monetary policy during 2022. The increase of $31bn in 'Other' was largely driven by the reclassification of our banking business in Canada to held for sale.

Third-party assets in Markets Treasury

	2022 $m	2021 $m
Cash and balances at central banks	**317,479**	379,106
Trading assets	**498**	329
Loans and advances:		
– to banks	**67,612**	47,363
– to customers	**2,102**	371
Reverse repurchase agreements	**53,016**	47,067
Financial investments	**319,852**	338,692
Other	**36,192**	5,451
At 31 Dec	**796,751**	818,379

Defined benefit pension plans

Market risk arises within our defined benefit pension plans to the extent that the obligations of the plans are not fully matched by assets with determinable cash flows.

For details of our defined benefit plans, including asset allocation, see Note 5 on the financial statements, and for pension risk management, see page 205.

Additional market risk measures applicable only to the parent company

HSBC Holdings monitors and manages foreign exchange risk and interest rate risk. In order to manage interest rate risk, HSBC Holdings uses the projected sensitivity of its NII to future changes in yield curves and the interest rate repricing gap tables.

During 2022, HSBC Holdings hedged $22.7bn of previously unhedged issuances. The impact can be observed in the NII sensitivity tables with a change from positive to negative sensitivities due to increases in interest rates.

Foreign exchange risk

HSBC Holdings' foreign exchange exposures derive almost entirely from the execution of structural foreign exchange hedges on behalf of the Group as its business-as-usual foreign exchange exposures are managed within tight risk limits. At 31 December 2022, HSBC Holdings had forward foreign exchange contracts of $30.1bn (2021: $25.9bn) to manage the Group's structural foreign exchange exposures.

For further details of our structural foreign exchange exposures, see page 212.

Sensitivity of net interest income

HSBC Holdings monitors NII sensitivity over 12-month and five-year time horizons, reflecting the longer-term perspective on interest rate risk management appropriate to a financial services holding company. These sensitivities assume that any issuance where HSBC Holdings has an option to reimburse at a future call date is called at this date. The tables below set out the effect on HSBC Holdings' future NII of the following scenarios:

- an immediate shock of 25bps to the current market-implied path of interest rates across all currencies on 1 January 2023; and
- an immediate shock of 100bps to the current market-implied path of interest rates across all currencies on 1 January 2023.

The NII sensitivities shown are indicative and based on simplified scenarios. Immediate interest rate rises of 25bps and 100bps would decrease projected NII for the 12 months to 31 December 2023 by $60m and $240m respectively. Conversely, falls of 25bps and 100bps would increase projected NII for the 12 months to 31 December 2023 by $60m and $240m respectively.

NII sensitivity to an instantaneous change in yield curves (12 months)

	$ $m	HK$ $m	£ $m	€ $m	Other $m	Total $m
Change in Jan 2023 to Dec 2023 (based on balance sheet at 31 December 2022)						
+25bps	**(66)**	**—**	**4**	**2**	**—**	**(60)**
-25bps	**66**	**—**	**(4)**	**(2)**	**—**	**60**
+100bps	**(265)**	**—**	**16**	**9**	**—**	**(240)**
-100bps	**265**	**—**	**(16)**	**(9)**	**—**	**240**
Change in Jan 2022 to Dec 2022 (based on balance sheet at 31 December 2021)						
+25bps	16	—	8	4	—	29
-25bps	(16)	—	(8)	(4)	—	(28)
+100bps	65	—	31	16	—	113
-100bps	(64)	—	(31)	(14)	—	(109)

NII sensitivity to an instantaneous change in yield curves (5 years)

	Year 1 $m	Year 2 $m	Year 3 $m	Year 4 $m	Year 5 $m	Total $m
Change in Jan 2023 to Dec 2023 (based on balance sheet at 31 December 2022)						
+25bps	**(60)**	**(41)**	**(36)**	**(37)**	**(38)**	**(212)**
-25bps	**60**	**41**	**36**	**37**	**38**	**212**
+100bps	**(240)**	**(162)**	**(143)**	**(148)**	**(154)**	**(847)**
-100bps	**240**	**162**	**143**	**148**	**154**	**847**
Change in Jan 2022 to Dec 2022 (based on balance sheet at 31 December 2021)					—	
+25bps	29	44	45	38	28	184
-25bps	(28)	(44)	(45)	(38)	(28)	(183)
+100bps	113	177	180	152	112	733
-100bps	(109)	(174)	(174)	(148)	(109)	(715)

The figures represent hypothetical movements in NII based on our projected yield curve scenarios, HSBC Holdings' current interest rate risk profile and assumed changes to that profile during the next five years.

The sensitivities represent our assessment of the change to a hypothetical base case based on a static balance sheet assumption, and do not take into account the effect of actions that could be taken to mitigate this interest rate risk.

Interest rate repricing gap table

The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included within the Group VaR, but is managed on a repricing gap basis. The following 'Repricing gap analysis of HSBC Holdings' table analyses the full term structure of interest rate mismatches within HSBC Holdings' balance sheet where debt issuances are reflected based on either the next repricing date if floating rate or the maturity/call date (whichever is first) if fixed rate.

Repricing gap analysis of HSBC Holdings

	Total	Up to 1 year	From over 1 to 5 years	From over 5 to 10 years	More than 10 years	Non-interest bearing
	$m	$m	$m	$m	$m	$m
Cash at bank and in hand:						
– balances with HSBC undertakings	**2,590**	**2,590**				
Derivatives	**2,811**					**2,811**
Loans and advances to HSBC undertakings	**76,516**	**22,545**	**29,759**	**20,347**	**2,000**	**1,865**
Financial investments in HSBC undertakings	**26,194**	**22,917**	**3,268**			**9**
Investments in subsidiaries	**163,211**	**5,425**	**8,395**	**600**		**148,791**
Other assets	**1,850**					**1,850**
Total assets	**273,172**	**53,477**	**41,422**	**20,947**	**2,000**	**155,326**
Amounts owed to HSBC undertakings	**(111)**					**(111)**
Financial liabilities designated at fair values	**(32,418)**	**(5,925)**	**(10,801)**	**(14,942)**	**(750)**	
Derivatives	**(1,220)**					**(1,220)**
Debt securities in issue	**(67,483)**	**(11,244)**	**(34,917)**	**(19,322)**	**(2,000)**	
Other liabilities	**(4,551)**					**(4,551)**
Subordinated liabilities	**(17,059)**	**(1,131)**	**(3,705)**	**(1,780)**	**(10,443)**	
Total equity	**(150,330)**	**(2,446)**	**(11,096)**	**(8,721)**		**(128,067)**
Total liabilities and equity	**(273,172)**	**(20,746)**	**(60,519)**	**(44,765)**	**(13,193)**	**(133,949)**
Off-balance sheet items attracting interest rate sensitivity		**(18,797)**	**(10,871)**	**1,434**	**6,184**	**308**
Net interest rate risk gap at 31 Dec 2022		**13,952**	**(8,226)**	**(22,384)**	**(5,009)**	**21,667**
Cumulative interest rate gap		**13,952**	**5,726**	**(16,658)**	**(21,667)**	
Cash at bank and in hand:						
– balances with HSBC undertakings	2,590	2,590				
Derivatives	2,811					2,811
Loans and advances to HSBC undertakings	76,516	22,545	29,759	20,347	2,000	1,865
Financial investments in HSBC undertakings	26,194	22,917	3,268			9
Investments in subsidiaries	163,211	5,425	8,395	600		148,791
Other assets	1,850					1,850
Total assets	273,172	53,477	41,422	20,947	2,000	155,326
Amounts owed to HSBC undertakings	(111)					(111)
Financial liabilities designated at fair values	(32,418)	(5,925)	(10,801)	(14,942)	(750)	
Derivatives	(1,220)					(1,220)
Debt securities in issue	(67,483)	(11,244)	(34,917)	(19,322)	(2,000)	
Other liabilities	(4,551)					(4,551)
Subordinated liabilities	(17,059)	(1,131)	(3,705)	(1,780)	(10,443)	
Total equity	(150,330)	(2,446)	(11,096)	(8,721)		(128,067)
Total liabilities and equity	(273,172)	(20,746)	(60,519)	(44,765)	(13,193)	(133,949)
Off-balance sheet items attracting interest rate sensitivity		(18,797)	(10,871)	1,434	6,184	308
Net interest rate risk gap at 31 Dec 2021[1]		13,952	(8,226)	(22,384)	(5,009)	21,667
Cumulative interest rate gap		13,952	5,726	(16,658)	(21,667)	

1 *Investments in subsidiaries and equity have been allocated based on call dates for any callable bonds. The prior year figures have been amended to reflect this.*

Market risk

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Overview

Market risk is the risk of an adverse financial impact on trading activities arising from changes in market parameters such as interest rates, foreign exchange rates, asset prices, volatilities, correlations and credit spreads. Exposure to market risk is separated into two portfolios: trading portfolios and non-trading portfolios.

For further details of market risk in non-trading portfolios, page 214, of the Annual Report and Accounts 2022.

Market risk management

Key developments in 2022

There were no material changes to our policies and practices for the management of market risk in 2022.

Governance and structure

The following diagram summarises the main business areas where trading market risks reside and the market risk measures used to monitor and limit exposures.

Risk types	**Trading risk** • Foreign exchange and commodities • Interest rates • Credit spreads • Equities
Global business	GBM
Risk measure	Value at risk | Sensitivity | Stress testing

The objective of our risk management policies and measurement techniques is to manage and control market risk exposures to optimise return on risk while maintaining a market profile consistent with our established risk appetite.

Market risk is managed and controlled through limits approved by the Group Chief Risk and Compliance Officer for HSBC Holdings. These limits are allocated across business lines and to the Group's legal entities. Each major operating entity has an independent market risk management and control sub-function, which is responsible for measuring, monitoring and reporting market risk exposures against limits on a daily basis. Each operating entity is required to assess the market risks arising in its business and to transfer them either to its local Markets and Securities Services or Markets Treasury unit for management, or to separate books managed under the supervision of the local ALCO. The Traded Risk function enforces the controls around trading in permissible instruments approved for each site as well as changes that follow completion of the new product approval process. Traded Risk also restricts trading in the more complex derivative products to offices with appropriate levels of product expertise and robust control systems.

Key risk management processes

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.

We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios, including interest rates, foreign exchange rates and equity prices. We use sensitivity measures to monitor the market risk positions within each risk type. Granular sensitivity limits are set for trading desks with consideration of market liquidity, customer demand and capital constraints, among other factors.

Value at risk

(Audited)

VaR is a technique for estimating potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and calculated for all trading positions regardless of how we capitalise them. Where we do not calculate VaR explicitly, we use alternative tools as summarised in the 'Stress testing' section below.

Our models are predominantly based on historical simulation that incorporates the following features:

- historical market rates and prices, which are calculated with reference to foreign exchange rates, commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements that are calculated with reference to data from the past two years; and
- calculations to a 99% confidence level and using a one-day holding period.

The models also incorporate the effect of option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR is used with awareness of its limitations. For example:

- The use of historical data as a proxy for estimating future market moves may not encompass all potential market events, particularly those that are extreme in nature. As the model is calibrated on the last 500 business days, it does not adjust instantaneously to a change in the market regime.
- The use of a one-day holding period for risk management purposes of trading books assumes that this short period is sufficient to hedge or liquidate all positions.
- The use of a 99% confidence level by definition does not take into account losses that might occur beyond this level of confidence.
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not reflect intra-day exposures.

Risk not in VaR framework

The risks not in VaR ('RNIV') framework captures and capitalises material market risks that are not adequately covered in the VaR model.

Risk factors are reviewed on a regular basis and are either incorporated directly in the VaR models, where possible, or quantified through either the VaR-based RNIV approach or a stress test approach within the RNIV framework. While VaR-based RNIVs are calculated by using historical scenarios, stress-type RNIVs are estimated on the basis of stress scenarios whose severity is calibrated to be in line with the capital adequacy requirements. The outcome of the VaR-based RNIV approach is included in the overall VaR calculation but excluded from the VaR measure used for regulatory back-testing. In addition, the stressed VaR measure also includes risk factors considered in the VaR-based RNIV approach.

Stress-type RNIVs include a deal contingent derivatives capital charge to capture risk for these transactions and a de-peg risk measure to capture risk to pegged and heavily managed currencies.

Stress testing

Stress testing is an important procedure that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at legal entity, regional and overall Group levels. A set of scenarios is used consistently across all regions within the Group. The risk appetite around potential stress losses for the Group is set and monitored against a referral limit.

Market risk reverse stress tests are designed to identify vulnerabilities in our portfolios by looking for scenarios that lead to loss levels considered severe for the relevant portfolio. These scenarios may be quite local or idiosyncratic in nature, and complement the systematic top-down stress testing.

Stress testing and reverse stress testing provide senior management with insights regarding the 'tail risk' beyond VaR, for which our appetite is limited.

Trading portfolios

Trading portfolios comprise positions held for client servicing and market-making, with the intention of short-term resale and/or to hedge risks resulting from such positions.

Back-testing

We routinely validate the accuracy of our VaR models by back-testing the VaR metric against both actual and hypothetical profit and loss. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenue of intra-day transactions. The hypothetical profit and loss reflects the profit and loss that would be realised if positions were held constant from the end of one trading day to the end of the next. This measure of profit and loss does not align with how risk is dynamically hedged, and is not therefore necessarily indicative of the actual performance of the business.

The number of hypothetical loss back-testing exceptions, together with a number of other indicators, is used to assess model performance and to consider whether enhanced internal monitoring of a VaR model is required. We back-test our VaR at set levels of our Group entity hierarchy.

Market risk in 2022

During 2022, financial markets were driven by concerns over high inflation and recession risks, against the backdrop of the Russia-Ukraine war and continued Covid-19-related pandemic restrictions in some countries. Throughout the year, several major central banks tightened their monetary policies at a faster pace than previously anticipated in order to counter rising inflation. As a result, bond markets sold off sharply and bond yields rose to multi-year highs. In addition, a change in the UK fiscal stance in late September led to the pound reaching record lows and to significant turmoil in the market for long-dated UK government bonds, which was exacerbated by rapid deleveraging of liability-driven investment funds used by pension schemes. There was pronounced volatility in equity valuations, with declines across most market sectors due to recession risks and tighter liquidity conditions. Foreign exchange markets were largely dominated by a strong US dollar, as a result of global geopolitical instability and the relatively fast pace of monetary tightening by the US Federal Reserve. Investor sentiment remained fragile in credit markets, with credit spreads in both investment-grade and high-yield debt benchmarks reaching their widest levels since the start of the Covid-19 pandemic.

We continued to manage market risk prudently during 2022. Sensitivity exposures and VaR remained within appetite as the business pursued its core market-making activity in support of our customers. Market risk was managed using a complementary set of risk measures and limits, including stress testing and scenario analysis.

Trading portfolios

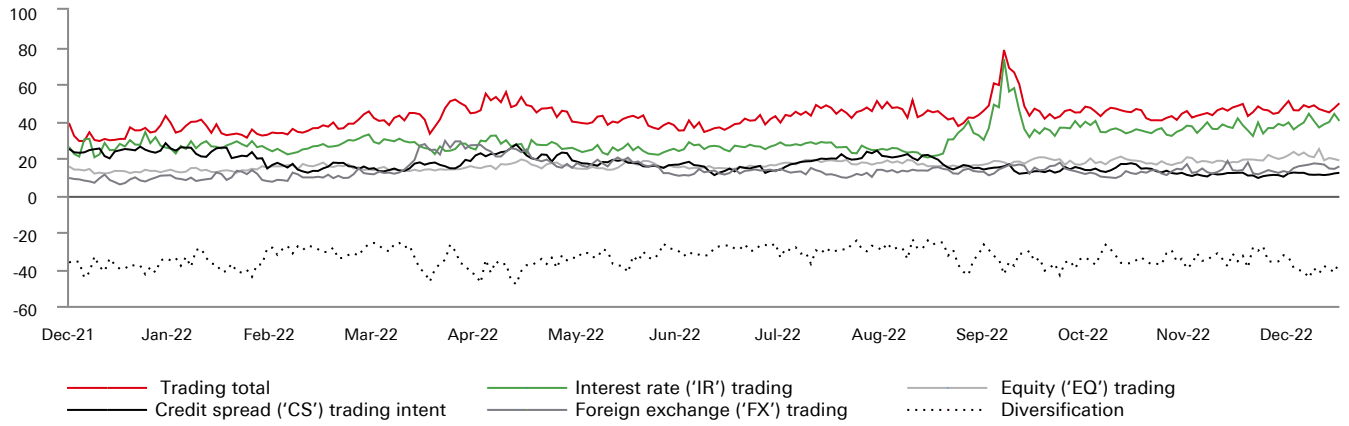
Value at risk of the trading portfolios

Trading VaR was predominantly generated by the Markets and Securities Services business.

Trading VaR as at 31 December 2022 increased compared with 31 December 2021. The increase, which peaked in September 2022, was mainly driven by interest rate risk factors across business lines, although lower loss contributions from credit spread risks provided a partial offset. VaR returned to normal operating range in the fourth quarter of 2022.

The daily levels of total trading VaR during 2022 are set out in the graph below.

Daily VaR (trading portfolios), 99% 1 day ($m)



The Group trading VaR for the year is shown in the table below.

Trading VaR, 99% 1 day[1]

(Audited)

	Foreign exchange and commodity	Interest rate	Equity	Credit spread	Portfolio diversification[2]	Total[3]
	$m	$m	$m	$m	$m	$m
Balance at 31 Dec 2022	**15.4**	**40.0**	**18.6**	**11.9**	**(36.4)**	**49.5**
Average	**13.6**	**29.6**	**16.1**	**16.8**	**(34.0)**	**42.1**
Maximum	**29.2**	**73.3**	**24.8**	**27.9**		**78.3**
Minimum	**5.7**	**20.2**	**11.5**	**9.1**		**29.1**
Balance at 31 Dec 2021	9.1	25.9	15.4	24.8	(36.5)	38.8
Average	12.9	33.8	16.7	19.2	(45.5)	37.1
Maximum	31.8	51.7	24.3	29.4		53.8
Minimum	6.7	18.5	12.1	12.2		27.7

1 *Trading portfolios comprise positions arising from the market-making and warehousing of customer-derived positions.*
2 *Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types – such as interest rate, equity and foreign exchange – together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occurs on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.*
3 *The total VaR is non-additive across risk types due to diversification effects.*

The table below shows trading VaR at a 99% confidence level compared with trading VaR at a 95% confidence level at 31 December 2022. This comparison facilitates the benchmarking of the trading VaR, which can be stated at different confidence levels, with financial institution peers. The 95% VaR is unaudited.

Comparison of trading VaR, 99% 1 day vs trading VaR, 95% 1 day

	Trading VaR, 99% 1 day	Trading VaR, 95% 1 day
	$m	$m
Balance at 31 Dec 2022	**49.5**	**31.7**
Average	**42.1**	**24.6**
Maximum	**78.3**	**49.0**
Minimum	**29.1**	**17.5**
Balance at 31 Dec 2021	38.8	21.6
Average	37.1	24.0
Maximum	53.8	30.0
Minimum	27.7	18.9

Back-testing

During 2022, the Group experienced 10 loss back-testing exceptions against hypothetical profit and losses, of which seven exceptions occurred in the second half of the year. The high number of hypothetical back-testing exceptions was primarily driven by the volatile market environment and a rapid shift in the global interest rate regime in 2022.

The hypothetical profit and loss reflects the profit and loss that would be realised if positions were held constant from the end of one trading day to the end of the next. This measure of profit and loss does not align with how risk is dynamically hedged, and is not therefore indicative of the actual performance of the business. Accordingly, of the 10 loss back-testing exceptions against hypothetical profit and loss, only one corresponded to an actual profit and loss exception.

The Group experienced four loss back-testing exceptions against actual profit and losses during 2022. Losses were attributable to fair value adjustments that were adopted for factors not incorporated within valuation models, and from the impacts of restructuring of derivative exposures under our RWA optimisation programme.

Given the heightened number of hypothetical loss back-testing exceptions in the second half of 2022, we have undertaken a review of our VaR model assumptions and updated the risk parameters within the model.

Market risk balance sheet linkages

The following balance sheet lines in the Group's consolidated position are subject to market risk:

Trading assets and liabilities

The Group's trading assets and liabilities are in almost all cases originated by GBM. These assets and liabilities are treated as traded risk for the purposes of market risk management, other than a limited number of exceptions, primarily in Global Banking where the short-term acquisition and disposal of the assets are linked to other non-trading-related activities such as loan origination.

Derivative assets and liabilities

We undertake derivative activity for three primary purposes: to create risk management solutions for clients, to manage the portfolio risks arising from client business, and to manage and hedge our own risks. Most of our derivative exposures arise from sales and trading activities within GBM. The assets and liabilities included in trading VaR give rise to a large proportion of the income included in net income from financial instruments held for trading or managed on a fair value basis. Adjustments to trading income such as valuation adjustments are not measured by the trading VaR model.

For information on the accounting policies applied to financial instruments at fair value, see Note 1 on the financial statements.

Climate risk TCFD

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Overview

Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a greener economy. Climate risk can materialise through:

- physical risk, which arises from the increased frequency and severity of weather events, such as hurricanes and floods, or chronic shifts in weather patterns;
- transition risk, which arises from the process of moving to a low-carbon economy, including changes in government or public policy, technology and end-demand; and
- greenwashing risk, which arises from the act of knowingly or unknowingly misleading stakeholders regarding our strategy relating to climate, the climate impact/benefit of a product or service, or the climate commitments or performance of our customers.

Approach and policy

We are affected by climate risks either directly or indirectly through our relationships with our customers, resulting in both financial and non-financial impacts.

We may face direct exposure to the physical impacts of climate change, which could negatively affect our day-to-day operations. Any detrimental impact to our customers from climate risk could negatively impact us either through credit losses on our loan book or losses on trading assets. We may also be impacted by reputational concerns related to the climate action or inaction of our customers. In addition, if we are perceived to mislead stakeholders on our business activities or if we fail to achieve our stated net zero ambitions, we could face greenwashing risk resulting in significant reputational damage and potential regulatory fines, impacting our revenue generating ability.

We have integrated climate risk into our existing risk taxonomy, and incorporated it within the risk management framework through the policies and controls for the existing risks where appropriate.

Our climate risk approach is aligned to our Group-wide risk management framework and three lines of defence model, which sets out how we identify, assess and manage our risks (for further details of our three lines of defence framework, see page 134). This approach provides the Board and senior management with visibility and oversight of our key climate risks.

Our initial approach to managing climate risk was focused on understanding physical and transition impacts across five priority risk types: wholesale credit risk, retail credit risk, reputational risk, resilience risk and regulatory compliance risk. In 2022, we expanded our scope to consider climate risk impacts on our other risk types in our risk taxonomy.

We consider greenwashing to be an important emerging risk that is likely to increase over time as we look to develop capabilities and products to achieve our net zero commitments, and work with our clients to help them transition to a low-carbon economy. To reflect this, our climate risk approach has been updated to include greenwashing risk, and guidance has been provided to the first and second lines of defence on the key risk factors, and how it should be managed.

Our ambition to achieve net zero in our financed emissions also exposes us to potential reputational, compliance and legal risks if we fail to effectively deliver on our ambition. Achieving this ambition is dependent on a number of known and unknown factors including the accuracy and reliability of data, emerging methodologies and the need to develop new tools to accurately assess emissions reductions. We have taken initial steps to develop our capabilities to monitor our exposures and set risk appetites, although, operationalising our ambition is dependent on data and methodologies maturing over time, and requires us to continue developing our internal processes and tools to help achieve our ambition.

The tables below provide an overview of the climate risk drivers considered within HSBC's climate risk framework. Primary risk drivers refer to risk drivers aligned to the Financial Stability Board's Task Force on Climate-related Financial Disclosures ('TCFD'), which sets a framework to help public companies and other organisations disclose climate-related risks and opportunities. Thematic risk drivers are bespoke to our internal climate risk framework.

The following table provides an overview of the physical and transition climate risk drivers.

Climate risk – primary risk drivers		Details	Potential Impacts
Physical	**Acute**	Increased frequency and severity of weather events causing disruption to business operations	• Decreased real estate values or stranded assets • Decreased household income and wealth • Increased costs of legal and compliance • Increased public scrutiny • Decreased profitability • Lower asset performance
	Chronic	Longer-term shifts in climate patterns (e.g. sustained higher temperatures, sea level rise, shifting monsoons or chronic heat waves)	
Transition	**Policy and legal**	Mandates on, and regulation of products and services and/or policy support for low carbon alternatives. Litigation from parties who have suffered loss and damage from climate impacts	
	Technology	Replacement of existing products with lower emissions options	
	End-demand (market)	Changing consumer demand from individuals and corporates	
	Reputational	Increased scrutiny following a change in stakeholder perceptions of climate-related action or inaction	

The table below provides an overview of the drivers of greenwashing risk, which is considered to be a thematic risk driver within HSBC's framework.

Climate risk – thematic risk drivers		Details
Greenwashing	**Firm**	Failure to be accurate and transparent in communicating our progress against our net zero ambition
	Product	Not taking steps to ensure our 'green' and 'sustainable' products are developed and marketed appropriately
	Client	Failing to check our products are being used for 'green' and 'sustainable' business activity and assessing the credibility of our customers' climate commitments and/or progress against key performance indicators

In February 2022, we refreshed a high-level assessment of how climate risk may impact HSBC taxonomy risk types over a 12-month horizon, and we conducted an assessment to understand which parts of our risk taxonomy could be impacted by greenwashing risk. The table below summarises the results of these exercises. Assessments were completed prior to year-end 2022 and do not take into account all of the factors that were considered in our assessment of climate risk impacts on the financial statements for the year ended 31 December 2022. The assessments will be refreshed annually, and, results may change as our understanding of climate risk and how it impacts HSBC evolves (for further details, see 'Impact on reporting and financial statements' on page 46). In addition to these assessments, we also consider climate risk in our emerging risk process, which considers potential impacts across longer time horizons (for further details, see 'Top and emerging risks' on page 135).

		Relevant risk drivers		
		Primary risk drivers		Thematic risk drivers
	Risk type	Physical	Transition	Greenwashing
Financial risk	Wholesale credit risk	●	●	
	Retail credit risk	●	●	
	Treasury risk – insurance risk	●	●	
	Treasury risk – pension risk		●	●
	Traded risk	●	●	
	Strategic business risk		●	
	Reputational risk		●	●
Non-financial risk	Regulatory compliance risk		●	●
	Resilience risk	●	●	●
	Model risk	●	●	●
	Financial crime risk	●	●	●
	Financial reporting risk		●	●
	Legal risk		●	●

● *Relevant risk driver*

Climate risk management

Key developments in 2022

Our climate risk programme continues to support the development of our climate risk management capabilities. The following outlines key developments in 2022.

- We updated our climate risk management approach to cover all risk types in our risk taxonomy.
- We expanded the scope of climate-related training for employees to cover additional topics, such as greenwashing risk, and increased the availability of training to the broader workforce.
- We developed new metrics to monitor physical climate risk exposure in our mortgage portfolio in all our markets, based on locally available data.
- We enhanced our transition and physical risk questionnaire and scoring tool, which will help us improve our understanding of the impact of transition and physical risk on corporate clients in high climate transition risk sectors.
- We assessed transition plans for EU and OECD managed clients in scope of our thermal coal phase-out policy.
- We developed our first internal climate scenario exercise, where we used four scenarios that were designed to articulate our view of the range of potential outcomes for global climate change. For further details of our internal climate scenario analysis, see page 226.

While we have made progress in developing our climate risk framework, there remains significant work to fully integrate climate risk, including the need to provide additional skills for our colleagues and clients on climate risk topics, and develop further metrics to understand how climate risk can impact our risk taxonomy. We also need to continue to enhance our stress testing capabilities and expand our greenwashing risk framework. We have a dependency on data and systems in order to achieve these aims, which continue to be enhanced.

Governance and structure

The Board takes overall responsibility for our ESG strategy, overseeing executive management in developing the approach, execution and associated reporting.

The Group ESG Committee supports the development and delivery of our ESG strategy, key policies and material commitments by providing oversight, coordination and management of ESG commitments and initiatives. It is co-chaired by the Group Company Secretary and Chief Governance Officer, and Group Chief Sustainability Officer.

The Group Chief Risk and Compliance Officer is responsible for the management of climate-related financial risks under the UK Senior Managers Regime, which involves holding overall accountability for the Group's climate risk programme. The Climate Risk Oversight Forum oversees risk activities relating to climate risk management and the escalation of climate risks. It is supported by equivalent forums at regional level.

The Group Reputational Risk Committee considers matters arising from customers, transactions and third parties that either present a serious potential reputational risk to the Group or merit a Group-led decision to ensure a consistent risk management approach across the regions, global businesses and global functions.

The Group Risk Management Meeting and the Group Risk Committee receive regular updates on our climate risk profile and progress of our climate risk programme.

For further details on the Group's ESG governance structure, see page 86.

Risk appetite

Our climate risk appetite supports the oversight and management of the financial and non-financial risks from climate change, and supports the business to deliver our climate ambition in a safe and sustainable way. Our initial risk appetite focused on the oversight and management of climate risks in five priority areas, including exposure to high transition risk sectors in our wholesale portfolio and physical risk exposures in our retail portfolio. We have created metrics both at global and regional levels, where appropriate, to help manage our risk appetite. We continue to review our risk appetite regularly to capture the most material climate risks and will enhance our metrics over time, including to monitor risk exposures associated with our financed emissions reduction targets.

Policies, processes and controls

We are integrating climate risk into the policies, processes and controls across many areas of our organisation, and we will continue to update these as our climate risk management capabilities mature over time. In 2022, we incorporated climate considerations into our UK mortgage origination process for our retail business, and new money request process for our key wholesale businesses. We also continued to enhance our climate risk scoring tool, which will enable us to assess our customers' exposures to climate risk. We also published our updated energy policy, covering the broader energy system, including upstream oil and gas, oil and gas power generation, coal, hydrogen, renewables and hydropower, nuclear, biomass and energy from waste, and we updated our thermal coal phase-out policy after its initial publication in 2021. For further details of how we manage climate risk across our global businesses, see page 64.

Wholesale credit risk

Identification and assessment

In 2019, we initially identified six key sectors where our wholesale credit customers had the highest exposure to climate transition risk, based on their carbon emissions, which were: automotive; chemicals; construction and building materials; metals and mining; oil and gas; and power and utilities. For a majority of customers in these sectors, we use a transition and physical risk questionnaire to help assess and improve our understanding of the impact of climate change on our customers' business models and any related transition strategies. Relationship managers work with these customers to record questionnaire responses and also help identify potential business opportunities to support the transition. Since 2020, we have rolled out the questionnaire so that it includes the majority of our largest customers in the next highest climate transition risk sectors: agriculture; industrials; real estate; and transportation. In 2022, we continued to roll out the physical and transition risk questionnaire in these sectors by adding new countries to the scope of the questionnaire. Due to ongoing data and methodology challenges across the industry, our risk appetite metrics remained limited in their ability to monitor our risk profile.

In 2023, we intend to roll out the questionnaire to additional customers and enhance our scoring model. We will also continue engaging with peers and regulators to explore approaches for further integration of climate in credit risk models. We continue to develop processes and training to improve the quality and accuracy of the questionnaire responses.

Management

In 2022, we updated our credit risk policy to require that relationship managers comment on climate risk factors in credit applications for new money requests. We continued using a climate risk scoring tool, which provides a climate risk score for each customer based on questionnaire responses. The climate risk score is used to inform portfolio level management discussions, and are made available to relationship management teams and credit risk management teams. The scoring tool will be enhanced and refined over time as more data becomes available.

In 2023, we aim to further embed climate risk considerations in our credit risk management processes.

Aggregation and reporting

We report our exposure to the six high transition risk sectors in the wholesale portfolio, as well as our related RWAs internally.

We also report the proportion of questionnaire responses that have a board policy or management plan for transition risk. Our key wholesale credit exposures are included as part of our broader ESG management information dashboard, which is presented to the Group Executive Committee each quarter. In addition, a representative from the Wholesale Credit Risk Management function attends the Global Climate Risk Oversight Forum to ensure there is consideration of this risk type, and we report our exposure through the climate risk management information dashboard at this meeting.

Since 2019, we have received responses from customers within the six high transition risk sectors, which represent 59% of our exposure, an increase in coverage of 7% since last year. The table below presents a breakdown of our customer responses by sector.

The table below also captures our lending activity, including environmentally responsible and sustainable finance activities, to customers within the six high risk sectors. Green financing for large companies that work in high transition sectors is also included. The overall exposure has decreased to 17.7% (2021: 18.2%). We have restated the 2021 comparatives to reflect the new 2022 sector allocations and to remove certain off-balance sheet exposures that were previously included following improvements in our data and processes. For further details of how we designate counterparties as high transition risk, see footnote 2.

Wholesale loan exposure to transition risk sectors and customer questionnaire responses at 31 December 2022[1]

	Automotive	Chemicals	Construction and building materials	Metals and mining	Oil and gas	Power and utilities	Total
	%	%	%	%	%	%	%
Wholesale loan exposure as % of total wholesale loans and advances to customers and banks[2,3,4]	≤ 3.0	≤ 3.3	≤ 3.2	≤ 2.1	≤ 2.6	≤ 3.5	≤ 17.7
Proportion of sector for which questionnaires were completed[5]	63	49	55	56	67	66	59
Proportion of questionnaire responses that reported either having a board policy or a management plan[5]	69	81	74	71	77	94	79
Sector weight as proportion of high transition risk sector[5]	16	19	18	12	15	20	100

1 *The 2022 numbers reflect the new 2022 sector allocations and remove certain off-balance sheet exposures that were previously included following improvements in our data and processes. See the* ESG Data Pack *for comparative 2020 and 2021 data.*
2 *Amounts shown in the table also include green and other sustainable finance loans, which support the transition to the net zero economy. The methodology for quantifying our exposure to high transition risk sectors and the transition risk metrics will evolve over time as more data becomes available and is incorporated in our risk management systems and processes.*
3 *Counterparties are allocated to the high transition risk sectors via a two-step approach. Firstly, where the main business of a group of connected counterparties is in a high transition risk sector, all lending to the group is included in one high transition risk sector irrespective of the sector of each individual obligor within the group. Secondly, where the main business of a group of connected counterparties is not in a high transition risk sector, only lending to individual obligors in the high transition risk sectors is included. From 2022, for Global Banking and Markets clients and Commercial Banking clients, the main business of a group of connected counterparties is identified by the industry that generates the majority of revenue within a group. Customer revenue data utilised during this allocation process is the most recent readily available and will not align to our own reporting period. In prior periods for Global Banking and Markets clients, the main business of a group of connected counterparties was identified by the relationship manager for the group. For Commercial Banking clients, the main business of a group of connected counterparties was identified based on the largest industry of HSBC's total lending limits to the group.*
4 *Total wholesale loans and advances to customers and banks amount to $658bn (2021: $662bn). Amounts include loans and advances that are held for sale.*
5 *All percentages are weighted by exposure.*

Retail credit risk

Identification and assessment

We continued to improve our identification and assessment of climate risk within our retail mortgage portfolio. We increased our investments in centrally available physical risk data and enhanced our internal risk assessment capabilities and models, in order to understand our physical risk exposure across a larger proportion of our global portfolio. We have also started to identify and monitor potential physical risk in the remainder of our global mortgage markets, using locally available data.

In 2022, we undertook an internal climate scenario analysis exercise to further our understanding and assessment of the potential impacts that physical risk could have on our mortgage portfolios. We completed detailed analysis for the UK, Hong Kong, Singapore and Australia, which together represent 73.8% of balances of the global mortgage portfolio. We also undertook a stress test for our portfolio in Singapore at the behest of the Monetary Authority of Singapore, and participated in the second round of the Bank of England's climate biennial exploratory scenario exercise, focusing on management actions. For further details of our approach and results of our scenario analysis, see the 'Insights on climate scenario analysis' section on page 226.

Management

We continued to review and update our retail credit risk management policies and processes to further embed climate risk, while monitoring local regulatory developments to ensure compliance.

In the UK, which has our largest retail mortgage portfolio, we integrated climate risk data into our decision-making framework as part of the mortgage origination process. We are actively managing our UK mortgage portfolio with a climate risk perspective, and in line with our risk appetite, taking conduct considerations into account in the lending decision-making process.

Our UK team is also proactively supporting customers by providing information on our public website relating to how physical risk and home energy efficiency ratings may impact their mortgage applications. This gives customers more insight when considering purchasing a property that may be susceptible to physical climate risk or which may not be energy efficient.

Aggregation and reporting

We manage and monitor the integration of climate risk in Wealth and Personal Banking through the WPB Risk Management Meeting and other senior leadership forums.

We assess the progress of the implementation of our strategic climate risk plans, and ensure that we update operational processes and risk management frameworks as our data and understanding of climate risk evolves. A senior representative from WPB Risk attends the Group Climate Risk Oversight Forum to ensure we maintain alignment with the Group strategy.

Monitoring climate risk

In 2022, each of our retail mortgage businesses defined metrics and began reporting on their potential balance sheet exposure to physical climate risk. Locally relevant data sources were used to identify properties or areas with potentially heightened climate risk. These climate risk exposure metrics are in the early stages of development and the underlying data and methodologies may require refinement in the future, although they provide an indicative view.

We continue to measure climate risk using third-party data in our most material mortgage market, which is the UK, where the primary physical risk facing properties is flooding. Using a risk methodology that considers a combination of the likelihood and severity of flood hazard affecting individual properties, we estimate that on a total value basis, and at present day risk levels, 3.5% of the UK retail mortgage portfolio is at high risk of flooding, and 0.2% is at a very high risk. This is based on approximately 93% coverage by value of our portfolio at the end of September 2022, and is reliant on flood data provided by Ambiental Risk Analytics.

In line with the UK government ambition to improve the energy performance certificate ('EPC') ratings of housing stock, we continue to identify the current and potential EPC ratings for individual properties within the UK mortgage portfolio.

At the end of September, we had approximately 62% of properties by value in our UK residential mortgage portfolio with a valid EPC certificate dated within the last 10 years. While 37.7% of these, with balances of $31.5bn, had a 'current' rating of A to C, 96.8% of them, with balances of $81.1bn, had the potential to improve to that level. We are working on improving the EPC data coverage, we currently do not have EPC data for properties in Northern Ireland.

For both flood risk and EPC data, we disclose the end of September position. This is due to the time required for the data to be processed by a third party and our reliance on the government's public EPC data.

Beyond the UK, we have strengthened our focus on the development of initiatives to support customers with their transition to more energy efficient homes.

The table below shows the maturity level of the UK retail mortgage portfolio at the end of December 2022, split by tenor.

Tenor	Loan by residual maturity ($bn)
<1 years	0.45
1–5 years	3.38
>5 years	143.90

For further details of flood risk and the EPC breakdown of our UK retail mortgage portfolio, see our *ESG Data Pack* at www.hsbc.com/esg.

Resilience risk

Identification and assessment

Our Operational and Resilience Risk function is responsible for overseeing the identification and assessment of physical and transition climate risks that may impact on the organisation's operational and resilience capabilities.

We are developing a deeper understanding of the risks to which our properties are subject, and assess the mitigants to ensure ongoing operational resilience.

Management

Operational and Resilience Risk policies are reviewed and enhanced periodically so they remain relevant to evolving risks, including those linked to climate change. The capability of our colleagues is enhanced through training, periodic communications and dedicated guidance.

Aggregation and reporting

With our ambition to achieve net zero in our own operations, we are particularly focused on developing measures to facilitate proactive risk management and assess progress against this strategic target.

Operational and Resilience Risk is represented at the Group's Climate Risk Oversight Forum.

Regulatory compliance risk

Identification and assessment

Compliance continues to prioritise the identification and assessment of compliance risks that may arise from climate risk.

Throughout 2022, our focus remained on greenwashing risk, particularly with regard to the development and ongoing governance of new, changed or withdrawn climate and ESG products and services, and ensuring sales practices and marketing materials were clear, fair and not misleading.

To support the ongoing management and mitigation of greenwashing risk, Regulatory Compliance worked across all business lines to enhance our product controls. This improved our ability to identify, assess and manage product-related greenwashing risks throughout the product governance lifecycle. Examples of ongoing enhancements include:

- integrating the consideration and mitigation of climate and ESG risks within our existing product governance framework;
- enhancing our product templates and forms to ensure climate risk is actively considered and documented by the business within product review and creation; and
- clarifying and improving product governance policies, associated guidance and key governance terms of reference to ensure new climate and ESG products, as well as climate- and ESG-related amendments to existing products, comply with both internal and external standards, and are subject to robust governance.

Management

Our policies continue to set the Group-wide standards that are required to manage the risk of breaches of our regulatory duty to customers, including those related to climate risk, ensuring fair customer outcomes are achieved. Our product and customer lifecycle policies have been enhanced to ensure they take climate into consideration. They are reviewed on a periodic basis to ensure they remain relevant and up to date.

The Compliance function continues to focus on improving the capability of colleagues through training, communications and dedicated guidance, with a particular focus on ensuring colleagues remain up to date with changes in the evolving regulatory landscape.

Aggregation and reporting

The Compliance function continues to operate an ESG and Climate Risk Working Group to track and monitor the integration and embedding of climate risk within the management of regulatory compliance risks. The working group also continues to monitor ongoing regulatory and legislative changes across the ESG and climate risk agenda.

We have continued to develop our key climate risk-related metrics and indicators, aligned to the broader focus on regulatory compliance risks, to continually improve our risk monitoring capability. This has included the development of a climate-specific risk profile, alongside the introduction and improvement of existing metrics and indicators.

The Compliance function continues to be represented at the Group's Climate Risk Oversight Forums.

Reputational risk

Identification and assessment

We implement sustainability risk policies, including the Equator Principles, as part of our broader reputational risk framework. We focus on sensitive sectors that may have a high adverse impact on people or the environment, and in which we have a significant number of customers. A key area of focus is high-carbon sectors, which include oil and gas, power generation, mining, agricultural commodities and forestry. In 2022, we published our updated energy policy, covering the broader energy system, including upstream oil and gas, oil and gas power generation, hydrogen, renewables and hydropower, nuclear, biomass and energy from waste. We also updated our thermal coal phase-out policy after its initial publication in 2021.

Management

As the primary point of contact for our customers, our relationship managers are responsible for checking that our customers meet policies aimed at reducing carbon impacts. Our global network of more than 75 sustainability risk managers provides local policy support and expertise to relationship managers. Risk Strategy includes a team of reputational and sustainability risk specialists that provides a higher level of guidance and is responsible for the oversight of policy compliance and implementation over wholesale banking activities.

For further details on our sustainability risk policies, see our ESG review on page 65.

Aggregation and reporting

Our Sustainability Risk Oversight Forum provides a Group-wide forum for senior members of our Group Risk and Compliance team and global businesses. It also oversees the development and implementation of sustainability risk policies. Cases involving complex sustainability risk issues related to customers, transactions or third parties are managed through the reputational risk and client selection governance process. We report annually on our implementation of the Equator Principles and the corporate loans, project-related bridge loans and advisory mandates completed under the principles. For the latest report, see: www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre. A representative from Reputational

Risk attends the Group Climate Risk Forum to ensure consideration of this risk type.

Other risks

The following section outlines key developments that we made to embed climate considerations within other risk types in our risk taxonomy. All risk functions, including those not referenced below, performed a materiality assessment to determine the impact of climate risk on their risk framework.

Treasury risk

We established a treasury risk-specific climate risk governance forum to provide oversight over climate-related topics that may impact Global Treasury. We updated relevant treasury risk policies to strengthen our climate risk guidance and requirements pertaining to treasury risk. We undertook an initial assessment to understand the exposure of high transition risk sectors within our pension plans.

Traded risk

We established a climate stress testing-focused working group to coordinate the implementation of climate stress testing, and support the delivery of internal climate scenario analysis. As part of the annual limit review in 2022, we developed a set of climate metrics for Markets and Securities Services, which we plan to implement in 2023.

Insights from climate scenario analysis

Scenario analysis supports our strategy by assessing our position under a range of climate scenarios. It helps to build our awareness of climate change, plan for the future and meet our growing regulatory requirements.

Having run our first Group-wide climate change scenario analysis exercise in 2021, we produced several climate stress tests for global regulators in 2022, including the Monetary Authority of Singapore and the European Central Bank. We also conducted our first internal climate scenario analysis.

We continue to develop how we produce our climate scenario analysis exercises so that we can have a more comprehensive understanding of climate headwinds, risks and opportunities that will support our strategic planning and actions.

In climate scenario analysis, we consider, jointly:

- transition risk arising from the process of moving to a net zero economy, including changes in policy, technology, consumer behaviour and stakeholder perception, which could each impact borrowers' operating income, financing requirements and asset values; and
- physical risk arising from the increased frequency and severity of weather events, such as hurricanes and floods, or chronic shifts in weather patterns, which could each impact property values, repair costs and lead to business interruptions.

We also analyse how these climate risks impact how we manage other risks within our organisation, including credit and market risks, and on an exploratory basis, operational, liquidity, insurance and pension risks.

Our climate scenarios

In our 2022 internal climate scenario analysis exercise, we used four scenarios that were designed to articulate our view of the range of potential outcomes for global climate change. The analysis considered the key regions in which we operate, and assessed the impact on our balance sheet between the 2022 and 2050 time period. In the following sections, the time horizons are considered to cover three distinct time periods: short term is up to 2025; medium term is 2026 to 2035; and long term is 2036 to 2050. The timeframes chosen are aligned to the Climate Action 100+ disclosure framework.

These internal scenarios were formed with reference to external publicly available climate scenarios, including those produced by the Network for Greening the Financial System ('NGFS'), the Intergovernmental Panel on Climate Change and the International Energy Agency. Using these external scenarios as a template, we adapted them by incorporating our unique climate risks and vulnerabilities to which our organisation and customers across different business sectors and regions are exposed. This helped us produce the scenarios, which varied by severity and probability, to analyse how climate risks will impact our portfolios. Our scenarios were:

- the Net Zero scenario, which aligns with our net zero strategy and is consistent with the Paris Agreement, and which assumes that there will be rapid and considerable climate action, limiting global warming to no more than 1.5°C by 2100, when compared with pre-industrial levels;
- the Current Commitments scenario, which assumes that climate action is limited to the current governmental commitments and pledges, leading to global temperature rises of 2.4°C by 2100;
- the Downside Transition Risk scenario, which assumes that climate action is delayed until 2030, but will be rapid enough to limit global temperature rises to 1.5°C by 2100; and
- the Downside Physical Risk scenario, which assumes climate action is limited to current governmental policies, leading to extreme global warming with global temperatures increasing by 3.1°C by 2100.

We have chosen these scenarios as they are designed to identify, measure and assess our most material climate vulnerabilities through considering our global presence, business activities and exposures. Our scenarios reflect inputs from our businesses and experts, and have been reviewed and approved through internal governance.

Our four scenarios reflect different levels of physical and transition risks. The scenario assumptions include varying levels of governmental climate policy changes, macroeconomic factors and technological developments. However, these scenarios rely on the development of technologies that are still unproven, such as global hydrogen production to decarbonise aviation and shipping.

The nature of the scenarios, our developing capabilities, and limitations of the analysis lead to outcomes that are indicative of climate change headwinds, although they are not a direct forecast.

Developments in climate science, data, methodology and scenario analysis techniques will help us shape our approach further. We therefore expect this view to change over time.

For further details of our four internal climate scenarios, including a table including their key underlying assumptions, see our ESG Data Pack *at www.hsbc.com/esg.*

Our modelling approach

For our scenario analysis, we used models to assess how transition and physical risks may impact our portfolios under different scenarios. Our models incorporate a range of climate-specific metrics that will have an impact on our customers, including expected production volumes, revenue, unit costs and capital expenditure.

We also assess how these metrics interplay with economic factors such as carbon prices, which represent the cost effect of climate-related policies that aim to discourage carbon-emitting activities and encourage low-carbon solutions. The expected result of higher carbon prices is a reduction in emissions as high-emission activities become uneconomical. We also assume carbon prices will vary from country to country.

The models for our wholesale corporate lending portfolio consider metrics across each climate scenario, and from 2022 also incorporated our customers' individual climate transition plans as part of our climate scenario analysis. These results in turn feed into the calculation of our risk-weighted assets and expected credit loss projections. For our residential real estate portfolio models, we focus on physical risk factors, including property locations, perils and insurance coverage when assessing the overall credit risk impact to the portfolio. The results were reviewed by our sector specialists who, subject to our governance procedures, make bespoke adjustments to our results based on their expert judgement when relevant.

We continue to enhance our capabilities by incorporating lessons learnt from previous exercises and feedback from key stakeholders, including regulators.

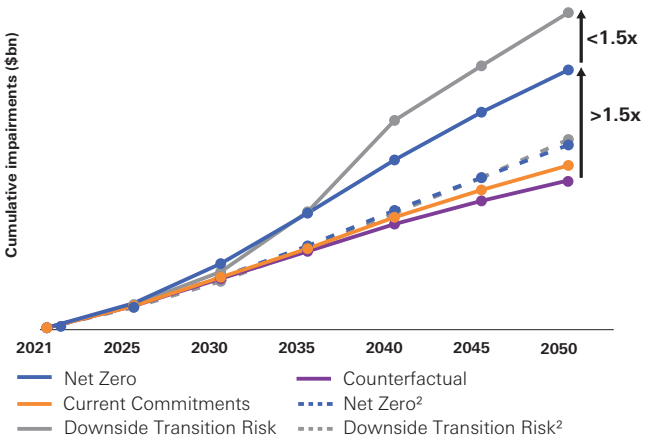
For a broad overview of the models that we use for our climate scenario analysis, as well as graphs that show how global carbon prices and carbon emissions will differ under our climate scenarios, see our ESG Data Pack *at www.hsbc.com/esg.*

Analysing the outputs of the climate scenario analysis

Climate scenario analysis allows us to model how different potential climate pathways may affect our customers and portfolios, particularly in respect of credit losses. As the chart below shows, losses are influenced by their exposure to a variety of climate risks under different climate scenarios. Under the Current Commitments scenario, we expect moderate levels of losses relating to transition risks. However, the rise in global warming will lead to increasing levels of physical risk losses in later years.

Modelled climate losses

How credit losses from climate risks have been modelled under different scenarios.



1 *The counterfactual scenario is modelled on a scenario where there will be no losses due to climate change.*
2 *The dotted lines in the chart show the impact of modelled expected credit losses following our strategic responses to reduce the effect of climate risks under the Net Zero and Downside Transition Risk scenarios.*

A gradual transition towards net zero, as shown in the Net Zero scenario, still requires fundamental shifts in our customers' business models, and significant investments. This will have an impact on profitability, leading to higher credit risk in the transition period. A delayed transition will be even more disruptive due to lower levels of innovation that limits the ability to decarbonise effectively, and rising carbon prices that squeeze profit margins.

Overall, our scenario analysis shows that the level of potential credit losses can be mitigated if we support our customers in enhancing their climate transition plans.

In the following sections, we assess the impacts to our banking portfolios under different climate scenarios.

How climate change is impacting our wholesale lending portfolio

In our scenario analysis, we assessed the impact of climate-related risks on our corporate counterparties under different climate scenarios, which we measured by reviewing the modelled effect on our expected credit losses ('ECL').

We focused our analysis on the 11 wholesale sectors that we expect to be most impacted by climate risks. As at December 2021, these portfolios represented 27% of our wholesale lending portfolio.

For each sector in each scenario, we calculated a peak ECL increase, a metric showing the highest level of ECL modelled to be experienced during the 2022 to 2050 period. The peak ECL increase metric compares the multiplied levels of exposure in the scenario against a counterfactual scenario that incorporates no climate change.

We use the sector's exposure at default ('EAD'), which represents the relative size of our exposure to potential losses from customer defaults. This helps to demonstrate which sectors are the most material to us in terms of the impact of climate change.

Due to current limitations, we are unable to fully model the impact of physical risks on our corporate customers' supply chain. As a result, we have not included the Downside Physical Risk scenario in the following analysis, although we continue to develop our modelling capabilities.

Impact of climate risk on wholesale lending portfolios under modelled climate solutions

Relative size of exposures at default and increase in peak ECL under each scenario compared with the counterfactual scenario (expressed as a multiple).

Sector level	Exposure at default	Net Zero	Downside Transition Risk	Current Commitments
Conglomerates and industrials		<5x	>5x	<1.5x
Power and utilities		<3x	<3x	<1.5x
Construction and building materials		<3x	<3x	<1.25x
Oil and gas		<1.5x	<1.5x	<1.25x
Chemicals		<4x	<4x	<1.5x
Automotive		<3x	<3x	<1.25x
Land transport and logistics		<5x	>5x	<1.5x
Aviation		<2x	<3x	<1.25x
Agriculture and soft commodities		<5x	<4x	<1.5x
Marine		<2x	<3x	<1.25x
Metals and mining		<5x	>5x	<1.5x

As the table above illustrates, we expect our ECL to rise most under the Net Zero or Downside Transition Risk scenarios. This is reflective of the high transition risks to which these sectors are exposed, and the potential impact of not having clear transition plans to mitigate these risks.

For many sectors, the impact of rising carbon prices will lead to increased credit losses. However, this will depend on individual companies to determine how much of the additional costs associated with carbon pricing will be absorbed by their suppliers or customers and demand for more economically viable substitute products that emerge.

The conglomerates and industrials sector, which includes large companies with business activities in multiple business segments, is the most impacted by climate change in each scenario. It also represents our largest climate-related exposure, and would potentially experience the highest increases in credit losses, largely due to the transition risks predominantly within the high-emitting and lower-profitability manufacturing segments.

Of our other largest and most impacted sectors, the power and utilities, construction and building materials, and chemicals sectors are subject to increased levels of transition risks due to their ongoing exposure to higher carbon emitting activities.

Within the analysis, there is a range of geographical outcomes, dictated by the varied pace of change in the transition to net zero, such as in Asia, where the quality of our customers' climate transition plans within our high-risk sectors lags behind other regions.

We use the results of our climate scenario analysis, including how different scenarios will impact on different sectors, to assess the impact of climate change risk mitigation on our clients, including our customers' creditworthiness. It informs us about climate risks in our wholesale portfolio, allowing us to identify and prioritise the sectors and sub-sectors that require the greatest support to transition. This also allow us to test the impact of actions that can support our customers' transition and our net zero ambition.

Our net zero ambition represents one of our four strategic pillars. For further details of our net zero ambition, see the 'Transition to net zero' section of the ESG review on page 47, including how we are supporting our customers transition to net zero on page 57.

How climate change is impacting our retail mortgage portfolio

As part of our internal climate scenario analysis, we carried out a detailed physical risk assessment of four of our retail mortgage markets – the UK, Hong Kong, Singapore and Australia – which represent 73.8% of balances in our retail mortgage portfolio.

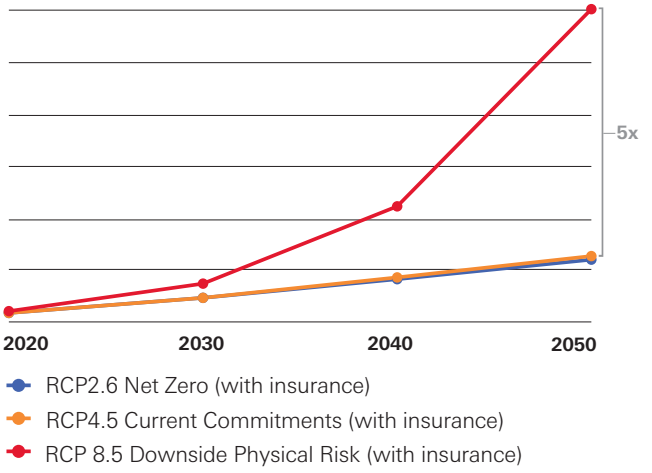
We modelled defaults and losses under three physical risk scenarios. Under the Net Zero and Current Commitments scenarios, we project minimal losses over the modelled time horizon. However, under the Downside Physical Risk scenario, the mortgage book is expected to experience a moderate increase in defaults and losses, as the severity of perils is expected to worsen, although overall losses are still low.

The modelling, data and methodology in relation to climate scenario analysis is still evolving, so the results are not expected to be stable or consistent in the short to medium term, and are meant to give an indicative, directional assessment for strategic awareness only.

In our analysis of our retail mortgage portfolio, we assessed several physical perils that could impact the value of properties, including flooding, wildfire and windstorms. We also assessed the ability and willingness of borrowers to service their debts.

In 2022, we enhanced the methodology to factor in the negative impact on property valuations, as well as the impact of affordability due to repair costs, following physical risk events. We also considered the retail mortgage portfolio with and without insurance. The scenario assumptions reflected whether or not properties within the portfolio had buildings insurance coverage to pay for damage incurred from physical events. In addition, we addressed geolocation data deficiencies, implemented new models and incorporated more data, although the data and models used to estimate defaults and losses are still evolving.

Losses as a proportion of global retail mortgage book under tested scenarios[1]



1 *Our internal climate scenarios are supported by the Intergovernmental Panel on Climate Change's Representative Concentration Pathways ('RCP') and are used as inputs into physical risk modelling. The Net Zero scenario is mostly aligned to the RCP 2.6 scenario; the Current Commitments scenario is mostly aligned to the RCP 4.5 scenario; and the Downside Physical Risk scenario is mostly aligned to the RCP 8.5 scenario.*

The modelled impact on our portfolio projects losses will remain negligible under the Net Zero and Current Commitments scenarios by 2050. Under the Downside Physical Risk (with insurance) scenario, although losses are five times larger than under the Net Zero and Current Commitments scenario, they remain at low levels. This moderate increase is largely driven by the expected demise of Flood Re in the UK in 2039. Flood Re is a UK government-backed insurance scheme that ensures that properties at the highest risk of flooding can obtain buildings insurance. Under this scenario, properties ceded to the scheme become uninsurable post-2039. The proportion of our properties that were reinsured by Flood Re was less than 4% of the UK portfolio at December 2021. While overall modelled losses were low, a large proportion of these were driven by such properties.

One of the outcomes from the exercise was that the non-availability of insurance for impacted properties was a key contributor to losses. It was assumed that properties that are insurable, or where insurance is affordable, will largely maintain their insurance. We also assessed the impact of enhanced EPC legislation, although it was deemed to be immaterial.

In addition, we assessed the risk of tropical cyclones and related storm surges as they were deemed material in Hong Kong. However, defaults are expected to remain low through to 2050 due to buildings being designed to withstand high wind speeds and investment into sea defences. We also looked at wildfire in Australia, although the risk and severity is limited given our mortgage portfolio is predominantly located in metropolitan areas. Similarly, losses in Singapore were low in all the scenarios due to its geographical location and strong sea defences.

Projected peril risk

Flooding is usually localised to specific areas that are close to water sources such as rivers or the coast, areas that are located in particular valleys where surface water can 'pool', or urban areas with poor drainage following flash floods.

As the 'Exposure to flooding' table below shows, the majority of properties located in the four markets are predicted to experience zero to low risk of flooding, with flood depths of less than 0.5 metres, under a 1-in-100-year event in each of the scenarios, demonstrating the resilience of our portfolio.

Exposure to flooding

Proportion of properties with projected flood depths in a 1-in-100-year severity flood event (%)[1]

Markets	Flood depth (metres)	Baseline flood risk 2022	Scenarios: Net Zero 2050	Scenarios: Downside Physical Risk 2050
UK	>1.5	**0.2**	0.2	0.4
	0.5–1.5	**0.7**	2.5	3.7
	0–0.5	**99.1**	97.3	95.9
Hong Kong	>1.5	**0.7**	0.8	1.2
	0.5–1.5	**1.2**	1.3	30.4
	0–0.5	**98.1**	97.9	68.4
Singapore	>1.5	**0**	0	0.1
	0.5–1.5	**2.8**	2.9	7.4
	0–0.5	**97.2**	97.1	92.5
Australia	>1.5	**0.6**	0.6	0.7
	0.5–1.5	**1.2**	1.2	2.6
	0–0.5	**98.2**	98.2	96.7

1 *Severe flood events include river and surface flooding and coastal inundation. The table compares 2050 snapshots under the Net Zero and Downside Physical Risk scenarios with a baseline view in 2022.*

The most impacted market is Hong Kong, where over 30% of the locations would be susceptible to flood depths greater than 0.5 metres under the Downside Physical Risk scenario in 2050. This is primarily driven by higher coastal and storm surges. However, this did not take into account building type and property floor level, which we expect would reduce the impact of flooding for a large number of individual properties, given the majority of buildings in Hong Kong are high-rise apartments.

For the remainder of the markets, more than 90% of mortgage locations within each market are expected to experience flood depths of less than 0.5 metres in all scenarios, which would not be material.

How climate change is impacting our commercial real estate portfolios

We assessed the impact of various perils to which our commercial real estate customers could be vulnerable, including flooding and windstorms. Our commercial real estate portfolio is globally diversified with larger concentrations in Hong Kong, the UK and the US.

The impact of exposures to these perils can lead to increased ECL, largely due to the cost of repairs following damages caused by physical risk events or property valuation impacts caused by the increasing frequency of physical risk events.

The 'Exposure to peril' table below shows exposure of our commercial real estate portfolio within our largest markets to specific physical risk events. The 'peak multiplier increase in ECL' table shows for our largest markets the peak ECL increase modelled to be experienced during the 2022 to 2050 period. This is a metric which compares the multiplied levels of exposure in the scenario against a counterfactual scenario that incorporates no climate change. We use the sector's exposure at default, which represents the relative size of our exposure to potential losses from customer defaults within each jurisdiction.

Exposure to peril

Proportion of our portfolio exposed to main perils in key markets.

	Coastal inundation %	Cyclone wind %	Surface water flooding %	Riverine flooding %
Hong Kong	**2**	**94**	**18**	**11**
UK	**15**	**0**	**12**	**8**
US	**16**	**83**	**15**	**28**

Peak multiplier increase in ECL

Relative size of exposures at default ('EAD') and increase in peak ECL under each scenario compared with the counterfactual scenario (expressed as a multiple)

	Exposure at default in 2021	Net Zero	Current Commit-ments	Downside Transition Risk	Downside Physical Risk (with insurance)	Downside Physical Risk (without insurance
Hong Kong	◆	<1.25x	<1.25x	<1.25x	<1.25x	<1.25x
UK	◆	<1.25x	<1.25x	<1.25x	<1.5x	<1.5x
US	◆	<1.25x	<1.25x	<1.25x	<1.25x	<1.5x

The tables show that despite a varying degree of exposure to perils across our most significant markets, our portfolio continues to maintain a strong level of resilience to physical climate risks out to the long term. In addition, the impact of insurance coverage mitigates some of the risks under the most severe Downside Physical Risk climate scenario.

Our largest credit exposure is in Hong Kong, where our portfolio has material exposure to tropical cyclone winds. However, the resulting impact on prospective credit losses remains low in the medium to long term due to high building standards.

In the UK, in line with our retail portfolio, the main perils that drive potential credit losses relate to coastal, river and surface water flooding, although the impacts from these perils are not expected to cause significant damages. Around 20% of our financed properties are in London, and most are protected by the Thames Barrier. Under the Net Zero scenario, transition risks materialise from 2025 due to the costs of retrofitting requirements, and these are expected to lead to increased impairments.

In the US, the major perils are from coastal flooding, largely in the north-east of the country and in Florida, and from hurricane impact, including gust damage, heavy rainfall and storm surges. The intensity of these events are expected to increase in the future with a greater proportion of tropical cyclones falling within the highest categories. These will not only affect the regions that are currently exposed, but also new areas due to the projected poleward shift of future tropical cyclones. Building resilience and the future availability and affordability of insurance cover in these regions will be the key determinants of climate risks.

Understanding the resilience of our critical properties

Climate change poses a physical risk to the buildings that we occupy as an organisation, including our offices, retail branches and data centres, both in terms of loss and damage, and business interruption. We measure the impacts of climate and weather events to our buildings on an ongoing basis, using historical, current and scenario modelled forecast data. In 2022, there were 38 major storms that had no impact on the availability of our buildings.

We use stress testing to evaluate the potential for impact to our owned or leased premises. Our scenario stress test, conducted in 2022, analysed how seven different climate change-related hazards – comprising coastal inundation, extreme heat, extreme winds, wildfires, riverine flooding, soil movement due to drought, and surface water flooding – could impact 500 of our critical and important buildings.

The 2022 stress test covered all 500 buildings and modelled climate change with the NGFS's Hot house scenario that projects that the rise in the temperature of the world will likely exceed 4°C by 2100. It also modelled a less severe scenario that projects that global warming will likely be limited to 2°C, in line with the upper limit ambition of the Paris Agreement.

Key findings from the 4°C or greater Hot house scenario included:

- By 2050, 62 of the 500 critical and important buildings will have a high potential for impact due to climate change, with insurance-related losses estimated to be in excess of 10% of the insured value of our buildings.
- These included 40 locations that face the risk of coastal flooding due to sea levels rising and storm surges associated with typhoons and hurricanes. In addition, five locations face the risk of fluvial flooding due to surface water run-off caused by heavy rain. The remaining 17 locations are data centres where the predominant risk emanate from a mixture of temperature extremes and water stress, which could impact the mechanical cooling equipment or drought for which the specific direct physical impacts could be soil movement.
- A further 84 locations have the potential to be impacted by climate change, albeit to a lesser extent, with insurance-related losses estimated at between 5% and 10% of the insured value of our buildings. The principal risks are coastal flooding, drought, temperature extremes, and water stress.

A key finding from the 2°C, less severe scenario showed:

- The total number of buildings at risk reduces from 146 to 98, with the same 62 key facilities still at risk by 2050 from the same perils.

This forward-looking data will inform real estate planning. We will continue to improve our understanding of how extreme weather events impact our building portfolio as climate risk assessment tools improve and evolve. Additionally, we buy insurance for property damage and business interruption, and consider insurance as a loss mitigation strategy depending on its availability and price.

We regularly review and enhance our building selection process and global engineering standards, and will continue to assess historical claims data to help ensure our building selection and design standards reflect the potential impacts of climate change.

Resilience risk

Overview

Resilience risk is the risk of sustained and significant business disruption from execution, delivery, physical security or safety events, causing the inability to provide critical services to our customers, affiliates, and counterparties. Resilience risk arises from failures or inadequacies in processes, people, systems or external events.

Resilience risk management

Key developments in 2022

The Operational and Resilience Risk sub-function provides robust risk steward oversight of the management of resilience risk by the Group businesses, functions and legal entities. This includes effective and timely independent challenge and expert advice. During the year, we carried out a number of initiatives to keep pace with geopolitical, regulatory and technology changes and to strengthen the management of resilience risk:

- We focused on enhancing our understanding of our risk and control environment, by updating our risk taxonomy and control libraries, and refreshing risk and control assessments.
- We implemented heightened monitoring and reporting of cyber, third-party, business continuity and payment/sanctions risks resulting from the Russia-Ukraine war, and enhanced controls and key processes where needed.
- We provided analysis and easy-to-access risk and control information and metrics to enable management to focus on non-financial risks in their decision making and appetite setting.
- We further strengthened our non-financial risk governance and senior leadership, and improved our coverage and risk steward oversight for data privacy and change execution.

We prioritise our efforts on material risks and areas undergoing strategic growth, aligning our location strategy to this need. We also remotely provide oversight and stewardship, including support of chief risk officers, in territories where we have no physical presence.

Governance and structure

The Operational and Resilience Risk target operating model provides a globally consistent view across resilience risks, strengthening our risk management oversight while operating effectively as part of a simplified non-financial risk structure. We view resilience risk across nine sub-risk types related to: failure to manage third parties; technology and cybersecurity; transaction processing; failure to protect people and places from physical malevolent acts; business interruption and incident risk; data risk; change execution risk; building unavailability; and workplace safety.

Risk appetite and key escalations for resilience risk are reported to the Non-Financial Risk Management Board, chaired by the Group Chief Risk and Compliance Officer, with an escalation path to the Group Risk Management Meeting and Group Risk Committee.

Key risk management processes

Operational resilience is our ability to anticipate, prevent, adapt, respond to, recover and learn from operational disruption while minimising customer and market impact. Resilience is determined by assessing whether we are able to continue to provide our most important services, within an agreed level. This is achieved via day-to-day oversight and periodic and ongoing assurance, such as deep dive reviews and controls testing, which may result in challenges being raised to the business by risk stewards. Further challenge is also raised in the form of quarterly risk steward opinion papers to formal governance. We accept we will not be able to prevent all disruption but we prioritise investment to continually improve the response and recovery strategies for our most important business services.

Business operations continuity

We continue to monitor the situation in Russia and Ukraine, and remain ready to take measures to help ensure business continuity, should the situation require. There has been no significant impact to our services in nearby markets where the Group operates. Publications from the UK government, EU Commission and energy company National Grid, among others, advised on potential plans for power cuts and energy restrictions across the UK and continental Europe during the winter period. In light of potential disruption, businesses and functions in these markets are reviewing existing plans and responses to minimise the impact.

Regulatory compliance risk

Overview

Regulatory compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching related financial services regulatory standards. Regulatory compliance risk arises from the failure to observe relevant laws, codes, rules and regulations and can manifest itself in poor market or customer outcomes and lead to fines, penalties and reputational damage to our business.

Regulatory compliance risk management

Key developments in 2022

The dedicated programme to embed our updated purpose-led conduct approach has concluded. Work to map applicable regulations to our risks and controls continues in 2023 alongside the adoption of new tooling to support enterprise-wide horizon scanning for new regulatory obligations and manage our regulatory reporting inventories. Climate risk has been integrated into regulatory compliance policies and processes, with enhancements made to the product governance framework and controls in order to ensure the effective consideration of climate – and in particular greenwashing – risks.

Governance and structure

The structure of the Compliance function is substantively unchanged and the Group Regulatory Conduct capability and Group Financial Crime capability both continue to work closely with the regional chief compliance officers and their respective teams to help them identify and manage regulatory and financial crime compliance risks across the Group.

They also work together and with all relevant stakeholders to achieve good conduct outcomes and provide enterprise-wide support on the compliance risk agenda in collaboration with the Group's Risk function.

Key risk management processes

The Group Regulatory Conduct capability is responsible for setting global policies, standards and risk appetite to guide the Group's management of regulatory compliance risk. It also devises the required frameworks, support processes and tooling to protect against regulatory compliance risks. The Group capability provides oversight, review and challenge to the regional chief compliance officers and their teams to help them identify, assess and mitigate regulatory compliance risks, where required. The Group's regulatory compliance risk policies are regularly reviewed. Global policies and procedures require the identification and escalation of any actual or potential regulatory breaches, and relevant reportable events are escalated to the Group's Non-Financial Risk Management Board, the Group Risk Management Meeting and Group Risk Committee, as appropriate. The Group Head of Compliance reports to the Group Chief Risk and Compliance Officer and attends the Risk and Compliance Executive Committee, the Group Risk Management Meeting and the Group Risk Committee.

Financial crime risk

Overview

Financial crime risk is the risk that HSBC's products and services will be exploited for criminal activity. This includes fraud, bribery and corruption, tax evasion, sanctions and export control violations, money laundering, terrorist financing and proliferation financing. Financial crime risk arises from day-to-day banking operations involving customers, third parties and employees.

Financial crime risk management

Key developments in 2022

We regularly review the effectiveness of our financial crime risk management framework, which includes consideration of the complex and dynamic nature of sanctions compliance risk. In 2022, we adapted our policies, procedures and controls to respond to the unprecedented volume and diverse set of sanctions and trade restrictions imposed against Russia following its invasion of Ukraine.

We also continued to make progress with several key financial crime risk management initiatives, including:

- We enhanced our screening and non-screening controls to aid the identification of potential sanctions risk related to Russia, as well as risk arising from export control restrictions.
- We deployed a key component of our intelligence-led, dynamic risk assessment capability for customer account monitoring in additional UK entities, Mexico and Singapore, and have expanded coverage to include monitoring of customer credit card activity in the UK. Furthermore we have deployed a next generation capability for the monitoring of correspondent banking activity in Hong Kong and the UK.
- We reconfigured our transaction screening capability to be ready for the global change to payment systems formatting under ISO20022 requirements, and enhanced transaction screening capabilities by implementing automated alert discounting.
- We strengthened the first-party lending fraud framework, reviewed and published an updated fraud policy and associated control library, and continued to develop fraud detection tools.

Governance and structure

The structure of the Financial Crime function remained substantively unchanged in 2022, although we continued to review the effectiveness of our governance framework to manage financial crime risk. The Group Head of Financial Crime and Group Money Laundering Reporting Officer continues to report to the Group Chief Risk and Compliance Officer, while the Group Risk Committee retains oversight of matters relating to fraud, bribery and corruption, tax evasion, sanctions and export control breaches, money laundering, terrorist financing and proliferation financing.

Key risk management processes

We will not tolerate knowingly conducting business with individuals or entities believed to be engaged in criminal activity. We require everybody in HSBC to play their role in maintaining effective systems and controls to prevent and detect financial crime. Where we believe we have identified suspected criminal activity or vulnerabilities in our control framework, we will take appropriate mitigating action.

We manage financial crime risk because it is the right thing to do to protect our customers, shareholders, staff, the communities in which we operate, as well as the integrity of the financial system on which we all rely. We operate in a highly regulated industry in which these same policy goals are codified in law and regulation.

We are committed to complying with the laws and regulations of all the markets in which we operate and applying a consistently high financial crime standard globally.

We continue to assess the effectiveness of our end-to-end financial crime risk management framework, and invest in enhancing our operational control capabilities and technology solutions to deter and detect criminal activity. We have simplified our framework by streamlining and de-duplicating policy requirements. We also strengthened our financial crime risk taxonomy and control libraries and our investigative and monitoring capabilities through technology deployments. We developed more targeted metrics, and have also enhanced our governance and reporting.

We are committed to working in partnership with the wider industry and the public sector in managing financial crime risk and we

participate in numerous public-private partnerships and information sharing initiatives around the world. In 2022, our focus remained on measures to improve the overall effectiveness of the global financial crime framework, notably by providing input into legislative and regulatory reform activities. We did this by contributing to the development of responses to consultation papers focused on how financial crime risk management frameworks can deliver more effective outcomes in detecting and deterring criminal activity, including tackling evolving criminal behaviours such as fraud. Through our work with the Wolfsberg Group and the Institute of International Finance, we supported the efforts of the global standard setter, the Financial Action Task Force. In addition, we participated in a number of public events related to tackling forestry crimes, wildlife trafficking and human trafficking.

Independent Reviews

In August 2022, the Board of Governors of the Federal Reserve System terminated its 2012 cease-and-desist order, with immediate effect. This order was the final remaining regulatory enforcement action that HSBC had entered into in 2012. In June 2021, the UK Financial Conduct Authority had already determined that no further skilled person work was required under section 166 of the Financial Services and Markets Act. The Group Risk Committee retains oversight of matters relating to financial crime, including any remaining remedial activity not yet completed as part of previous recommendations.

Model risk

Overview

Model risk is the risk of inappropriate or incorrect business decisions arising from the use of models that have been inadequately designed, implemented or used, or from models that do not perform in line with expectations and predictions.

Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.

Key developments in 2022

In 2022, we continued to make improvements in our model risk management processes amid regulatory changes in model requirements.

Initiatives during the year included:

- In response to regulatory capital changes, we redeveloped, independently validated and submitted to the PRA and other local regulators our models for the internal ratings-based ('IRB') approach for credit risk, internal model method ('IMM') for counterparty credit risk and internal model approach ('IMA') for market risk. These new models have been built to enhanced standards using improved data as a result of investment in processes and systems.
- We redeveloped and validated models impacted by the changes to the alternative rate setting mechanisms due to the Ibor transition.
- We embedded changes to address gaps in the control framework that emerged as a result of increases in adjustments and overlays that were applied to compensate for the impact of the Covid-19 pandemic, and the subsequent volatility due to the effects of the rise in global interest rates on the ECL models.
- We have increased the involvement of first line colleagues in businesses and functions in the development and management of models. We also put an enhanced focus on key model risk drivers such as data quality and model methodology.
- We have sought to enhance the reporting that supports the model risk appetite measures, to support our businesses and functions in managing model risk more effectively.
- We continued the transformation of the Model Risk Management team, with further enhancements to the independent model validation processes, including new systems and working practices. Key senior hires were made during the year to lead the business areas and regions to strengthen oversight and expertise within the function.
- We have completed independent validations of a suite of newly developed models for the forthcoming IFRS17 accounting standards for insurance.
- We have enhanced our model risk teams with specialist skills to manage the increased model risk in areas such as climate risk and models using advanced analytics and machine learning, as they become critical areas of focus that will grow in importance in 2023 and beyond.

Governance and structure

Model risk governance committees at the Group, business and functional levels provide oversight of model risk. The committees include senior leaders from the three global businesses and the Group Risk and Compliance function, and focus on model-related concerns and are supported by key model risk metrics. We also have Model Risk Committees in our geographical regions focused on local delivery and requirements. The Group-level Model Risk Committee is chaired by the Group Chief Risk and Compliance Officer, and the heads of key businesses participate in these meetings.

Key risk management processes

We use a variety of modelling approaches, including regression, simulation, sampling, machine learning and judgemental scorecards for a range of business applications. These activities include customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting. Global responsibility for managing model risk is delegated from the Board to the Group Chief Risk and Compliance Officer, who authorises the Group Model Risk Committee. This committee regularly reviews our model risk management policies and procedures, and requires the first line of defence to demonstrate comprehensive and effective controls based on a library of model risk controls provided by Model Risk Management. Model Risk Management also reports on model risk to senior management and the Group Risk Committee on a regular basis through the use of the risk map, risk appetite metrics and top and emerging risks.

We regularly review the effectiveness of these processes, including the model oversight committee structure, to help ensure appropriate understanding and ownership of model risk is embedded in the businesses and functions.

Insurance manufacturing operations risk

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Overview

The key risks for our insurance manufacturing operations are market risk, in particular interest rate and equity, credit risk and insurance underwriting risk. These have a direct impact on the financial results and capital positions of the insurance operations. Liquidity risk, while significant in other parts of the Group, is relatively minor for our insurance operations.

HSBC's insurance business

We sell insurance products through a range of channels including our branches, insurance salesforces, direct channels and third-party distributors. The majority of sales are through an integrated bancassurance model that provides insurance products principally for customers with whom we have a banking relationship, although the proportion of sales through other sources such as independent financial advisers, tied agents and digital is increasing.

For the insurance products we manufacture, the majority of sales are savings, universal life and protection contracts.

We choose to manufacture these insurance products in HSBC subsidiaries based on an assessment of operational scale and risk appetite. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts by keeping part of the underwriting profit and investment income within the Group.

We have life insurance manufacturing subsidiaries in eight markets, which are Hong Kong, Singapore, mainland China, France, the UK, Malta, Mexico and Argentina. We also have a life insurance manufacturing associate in India.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a small number of leading external insurance companies in order to provide insurance products to our customers. These arrangements are generally structured with our exclusive strategic partners and earn the Group a combination of commissions, fees and a share of profits. We distribute insurance products in all of our geographical regions.

This section focuses only on the risks relating to the insurance products we manufacture.

Insurance manufacturing operations risk management

Key developments in 2022

The insurance manufacturing subsidiaries follow the Group's risk management framework. In addition, there are specific policies and practices relating to the risk management of insurance contracts, which have not changed materially over 2022. During the year, there was continued market volatility observed across interest rates, equity markets and foreign exchange rates. This was predominantly driven by geopolitical factors and wider inflationary concerns. One area of key risk management focus was the implementation of the new accounting standard, IFRS17 'Insurance Contracts'. Given the fundamental nature of the impact of the accounting standard on insurance accounting, this presents additional financial reporting and model risks for the Group. Another area of focus was the acquisition early in 2022 of an insurance business in Singapore and the subsequent integration of that business into the Group's risk management framework.

Governance and structure

(Audited)

Insurance manufacturing risks are managed to a defined risk appetite, which is aligned to the Group's risk appetite and risk management framework, including its three lines of defence model. For details of the Group's governance framework, see page 133. The Global Insurance Risk Management Meeting oversees the control framework globally and is accountable to the WPB Risk Management Meeting on risk matters relating to the insurance business.

The monitoring of the risks within our insurance operations is carried out by Insurance Risk teams. The Group's risk stewardship functions support the Insurance Risk teams in their respective areas of expertise.

Stress and scenario testing

(Audited)

Stress testing forms a key part of the risk management framework for the insurance business. We participate in local and Group-wide regulatory stress tests, as well as internally developed stress and scenario tests, including Group internal stress test exercises.

The results of these stress tests and the adequacy of management action plans to mitigate these risks are considered in the Group's ICAAP and the entities' regulatory Own Risk and Solvency Assessments ('ORSAs'), which are produced by all material entities.

Key risk management processes

Market risk

(Audited)

All our insurance manufacturing subsidiaries have market risk mandates and limits that specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk that they may retain. They manage market risk by using, among others, some or all of the techniques listed below, depending on the nature of the contracts written:

- We are able to adjust bonus rates to manage the liabilities to policyholders for products with discretionary participating features ('DPF'). The effect is that a significant proportion of the market risk is borne by the policyholder.
- We use asset and liability matching where asset portfolios are structured to support projected liability cash flows. The Group manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity, volatility and target investment return. We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how best to structure asset holdings to support liabilities.
- We use derivatives to protect against adverse market movements.
- We design new products to mitigate market risk, such as changing the investment return sharing proportion between policyholders and the shareholder.

Credit risk

(Audited)

Our insurance manufacturing subsidiaries also have credit risk mandates and limits within which they are permitted to operate, which consider the credit risk exposure, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information.

Stress testing is performed on investment credit exposures using credit spread sensitivities and default probabilities.

We use a number of tools to manage and monitor credit risk. These include a credit report containing a watch-list of investments with current credit concerns, primarily investments that may be at risk of future impairment or where high concentrations to counterparties are present in the investment portfolio. Sensitivities to credit spread risk are assessed and monitored regularly.

Capital and liquidity risk

(Audited)

Capital risk for our insurance manufacturing subsidiaries is assessed in the Group's ICAAP based on their financial capacity to support the risks to which they are exposed. Capital adequacy is assessed on both the Group's economic capital basis, and the relevant local insurance regulatory basis.

Risk appetite buffers are set to ensure that the operations are able to remain solvent, allowing for business-as-usual volatility and extreme but plausible stress events. In certain cases, entities use reinsurance to manage capital risk.

Liquidity risk is relatively minor for the insurance business. It is managed by cash flow matching and maintaining sufficient cash resources, investing in high credit-quality investments with deep and liquid markets, monitoring investment concentrations and restricting them where appropriate, and establishing committed contingency borrowing facilities.

Insurance manufacturing subsidiaries complete quarterly liquidity risk reports and an annual review of the liquidity risks to which they are exposed.

Insurance underwriting risk

Our insurance manufacturing subsidiaries primarily use the following frameworks and processes to manage and mitigate insurance underwriting risks:

- a formal approval process for launching new products or making changes to products;
- a product pricing and profitability framework, which requires initial and ongoing assessment of the adequacy of premiums charged on new insurance contracts to meet the risks associated with them;
- a framework for customer underwriting;
- reinsurance, which cedes risks to third-party reinsurers to keep risks within risk appetite, reduce volatility and improve capital efficiency; and
- oversight of expense and reserve risks by entity Financial Reporting Committees.

Insurance manufacturing operations risk in 2022

Measurement

The following tables show the composition of assets and liabilities by contract type and by geographical region.

Balance sheet of insurance manufacturing subsidiaries by type of contract[1]

(Audited)

	With DPF	Unit-linked	Other contracts[2]	Shareholder assets and liabilities	Total
	$m	$m	$m	$m	$m
Financial assets	**89,907**	**8,144**	**21,467**	**9,086**	**128,604**
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**30,950**	**7,992**	**3,899**	**1,543**	**44,384**
– derivatives	**418**	**—**	**30**	**15**	**463**
– financial investments at amortised cost	**46,142**	**43**	**16,114**	**4,805**	**67,104**
– financial investments at fair value through other comprehensive income	**8,349**	**—**	**486**	**1,920**	**10,755**
– other financial assets[3]	**4,048**	**109**	**938**	**803**	**5,898**
Reinsurance assets	**2,945**	**50**	**1,724**	**2**	**4,721**
PVIF[4]	**—**	**—**	**—**	**9,900**	**9,900**
Other assets and investment properties	**2,521**	**2**	**225**	**957**	**3,705**
Total assets	**95,373**	**8,196**	**23,416**	**19,945**	**146,930**
Liabilities under investment contracts designated at fair value	**—**	**2,084**	**3,296**	**—**	**5,380**
Liabilities under insurance contracts	**91,948**	**5,438**	**17,521**	**—**	**114,907**
Deferred tax[5]	**227**	**6**	**22**	**1,495**	**1,750**
Other liabilities	**—**	**—**	**—**	**7,212**	**7,212**
Total liabilities	**92,175**	**7,528**	**20,839**	**8,707**	**129,249**
Total equity	**—**	**—**	**—**	**17,681**	**17,681**
Total liabilities and equity at 31 Dec 2022	**92,175**	**7,528**	**20,839**	**26,388**	**146,930**
Financial assets	88,969	8,881	19,856	9,951	127,657
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	30,669	8,605	3,581	1,827	44,682
– derivatives	129	1	15	2	147
– financial investments at amortised cost	42,001	61	14,622	4,909	61,593
– financial investments at fair value through other comprehensive income	10,858	—	459	1,951	13,268
– other financial assets[3]	5,312	214	1,179	1,262	7,967
Reinsurance assets	2,180	72	1,666	3	3,921
PVIF[4]	—	—	—	9,453	9,453
Other assets and investment properties	2,558	1	206	820	3,585
Total assets	93,707	8,954	21,728	20,227	144,616
Liabilities under investment contracts designated at fair value	—	2,297	3,641	—	5,938
Liabilities under insurance contracts	89,492	6,558	16,757	—	112,807
Deferred tax[5]	179	9	24	1,418	1,630
Other liabilities	—	—	—	7,269	7,269
Total liabilities	89,671	8,864	20,422	8,687	127,644
Total equity	—	—	—	16,972	16,972
Total liabilities and equity at 31 Dec 2021	89,671	8,864	20,422	25,659	144,616

1 *Balance sheet of insurance manufacturing operations is shown before elimination of inter-company transactions with HSBC non-insurance operations.*
2 *'Other contracts' includes term insurance, credit life insurance, universal life insurance and investment contracts not included in the 'Unit-linked' or 'With DPF' columns.*
3 *Comprise mainly loans and advances to banks, cash and inter-company balances with other non-insurance legal entities.*
4 *Present value of in-force long-term insurance business.*
5 *'Deferred tax' includes the deferred tax liabilities arising on recognition of PVIF.*

Balance sheet of insurance manufacturing subsidiaries by geographical region[1,2]

(Audited)

	Europe	Asia	Latin America	Total
	$m	$m	$m	$m
Financial assets	**27,407**	**100,224**	**973**	**128,604**
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**15,858**	**28,030**	**496**	**44,384**
– derivatives	**292**	**171**	**—**	**463**
– financial investments – at amortised cost	**383**	**66,674**	**47**	**67,104**
– financial investments – at fair value through other comprehensive income	**9,505**	**861**	**389**	**10,755**
– other financial assets[3]	**1,369**	**4,488**	**41**	**5,898**
Reinsurance assets	**183**	**4,533**	**5**	**4,721**
PVIF[4]	**1,296**	**8,407**	**197**	**9,900**
Other assets and investment properties	**958**	**2,687**	**60**	**3,705**
Total assets	**29,844**	**115,851**	**1,235**	**146,930**
Liabilities under investment contracts designated at fair value	**1,143**	**4,237**	**—**	**5,380**
Liabilities under insurance contracts	**24,076**	**89,904**	**927**	**114,907**
Deferred tax[5]	**288**	**1,440**	**22**	**1,750**
Other liabilities	**2,166**	**4,992**	**54**	**7,212**
Total liabilities	**27,673**	**100,573**	**1,003**	**129,249**
Total equity	**2,171**	**15,278**	**232**	**17,681**
Total liabilities and equity at 31 Dec 2022	**29,844**	**115,851**	**1,235**	**146,930**
Financial assets	34,264	92,535	858	127,657
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	19,030	25,248	404	44,682
– derivatives	65	82	—	147
– financial investments – at amortised cost	1,161	60,389	43	61,593
– financial investments – at fair value through other comprehensive income	12,073	817	378	13,268
– other financial assets[3]	1,935	5,999	33	7,967
Reinsurance assets	213	3,703	5	3,921
PVIF[4]	1,098	8,177	178	9,453
Other assets and investment properties	1,091	2,431	63	3,585
Total assets	36,666	106,846	1,104	144,616
Liabilities under investment contracts designated at fair value	1,396	4,542	—	5,938
Liabilities under insurance contracts	30,131	81,840	836	112,807
Deferred tax[5]	250	1,357	23	1,630
Other liabilities	2,711	4,523	35	7,269
Total liabilities	34,488	92,262	894	127,644
Total equity	2,178	14,584	210	16,972
Total liabilities and equity at 31 Dec 2021	36,666	106,846	1,104	144,616

1 HSBC has no insurance manufacturing subsidiaries in the Middle East and North Africa or North America.
2 Balance sheet of insurance manufacturing operations is shown before elimination of inter-company transactions with HSBC non-insurance operations.
3 Comprise mainly loans and advances to banks, cash and inter-company balances with other non-insurance legal entities.
4 Present value of in-force long-term insurance business.
5 'Deferred tax' includes the deferred tax liabilities arising on recognition of PVIF.

Key risk types

Market risk

(Audited)

Description and exposure

Market risk is the risk of changes in market factors affecting HSBC's capital or profit. Market factors include interest rates, equity and growth assets and foreign exchange rates.

Our exposure varies depending on the type of contract issued. Our most significant life insurance products are contracts with discretionary participating features ('DPF'). These products typically include some form of capital guarantee or guaranteed return on the sums invested by the policyholders, to which discretionary bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in fixed interest, with a proportion allocated to other asset classes to provide customers with the potential for enhanced returns.

DPF products expose HSBC to the risk of variation in asset returns, which will impact our participation in the investment performance.

In addition, in some scenarios the asset returns can become insufficient to cover the policyholders' financial guarantees, in which case the shortfall has to be met by HSBC. Amounts are held against the cost of such guarantees, calculated by stochastic modelling in the larger entities.

The cost of such guarantees is accounted for as a deduction from the present value of in-force ('PVIF') asset, unless the cost of such guarantees is already explicitly allowed for within the insurance contract liabilities.

The following table shows the total reserve held for the cost of guarantees, the range of investment returns on assets supporting these products and the implied investment return that would enable the business to meet the guarantees.

The cost of guarantees decreased to $745m (2021: $938m), primarily due increases in interest rates during 2022.

For unit-linked contracts, market risk is substantially borne by the policyholder, but some market risk exposure typically remains, as fees earned are related to the market value of the linked assets.

Financial return guarantees

(Audited)

	2022			2021		
	Investment returns implied by guarantee	**Long-term investment returns on relevant portfolios**	**Cost of guarantees**	Investment returns implied by guarantee	Long-term investment returns on relevant portfolios	Cost of guarantees
	%	**%**	**$m**	%	%	$m
Capital	**—**	**1.6-5.1**	**47**	—	0.7-2.3	220
Nominal annual return	**0.1-1.9**	**3.6-6.8**	**548**	0.1-1.9	2.7-6.4	423
Nominal annual return	**2.0-3.9**	**2.0-5.5**	**109**	2.0-3.9	2.2-4.1	183
Nominal annual return	**4.0-5.0**	**2.0-4.2**	**41**	4.0-5.0	2.2-4.2	112
At 31 Dec			**745**			938

Sensitivities

Changes in financial market factors, from the economic assumptions in place at the start of the year, had a negative impact on reported profit before tax of $988m (2021: $516m). The following table illustrates the effects of selected interest rate, equity price and foreign exchange rate scenarios on our profit for the year and the total equity of our insurance manufacturing subsidiaries. These sensitivities are prepared in accordance with current IFRSs, which will change following the adoption of IFRS 17 'Insurance Contracts', effective from 1 January 2023. Further information about the adoption of IFRS 17 is provided on page 335.

Where appropriate, the effects of the sensitivity tests on profit after tax and equity incorporate the impact of the stress on the PVIF.

Due in part to the impact of the cost of guarantees and hedging strategies, which may be in place, the relationship between the profit and total equity and the risk factors is non-linear, particularly in a low interest-rate environment. Therefore, the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. For the same reason, the impact of the stress is not necessarily symmetrical on the upside and downside. The sensitivities are stated before allowance for management actions, which may mitigate the effect of changes in the market environment. The sensitivities presented allow for adverse changes in policyholder behaviour that may arise in response to changes in market rates. The differences between the impacts on profit after tax and equity are driven by the changes in value of the bonds measured at fair value through other comprehensive income, which are only accounted for in equity. The increased upward sensitivity and reduced downward sensitivity of profit after tax to a parallel shift in yield curves is driven by rising interest rates having reduced the sensitivity impact associated with the cost of guarantees in France.

Sensitivity of HSBC's insurance manufacturing subsidiaries to market risk factors

(Audited)

	2022		2021	
	Effect on profit after tax	**Effect on total equity**	Effect on profit after tax	Effect on total equity
	$m	**$m**	$m	$m
+100 basis point parallel shift in yield curves	**(100)**	**(236)**	(2)	(142)
-100 basis point parallel shift in yield curves	**35**	**177**	(154)	(9)
10% increase in equity prices	**391**	**391**	369	369
10% decrease in equity prices	**(419)**	**(419)**	(377)	(377)
10% increase in US dollar exchange rate compared with all currencies	**98**	**98**	80	80
10% decrease in US dollar exchange rate compared with all currencies	**(98)**	**(98)**	(80)	(80)

Credit risk

(Audited)

Description and exposure

Credit risk is the risk of financial loss if a customer or counterparty fails to meet their obligation under a contract. It arises in two main areas for our insurance manufacturers:

- risk associated with credit spread volatility and default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
- risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

The amounts outstanding at the balance sheet date in respect of these items are shown in the table on page 235.

The credit quality of the reinsurers' share of liabilities under insurance contracts is assessed as 'satisfactory' or higher (as defined on page 146), with 100% of the exposure being neither past due nor impaired (2021: 100%).

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholders. Therefore, our exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds. The credit quality of insurance financial assets is included in the table on page 165.

The risk associated with credit spread volatility is to a large extent mitigated by holding debt securities to maturity, and sharing a degree of credit spread experience with policyholders.

Liquidity risk

(Audited)

Description and exposure

Liquidity risk is the risk that an insurance operation, though solvent, either does not have sufficient financial resources available to meet its obligations when they fall due, or can secure them only at excessive cost. Liquidity risk may be able to be shared with policyholders for products with DPF.

The following table shows the expected undiscounted cash flows for insurance liabilities at 31 December 2022.

The profile of the expected maturity of insurance contracts at 31 December 2022 remained comparable with 2021.

The remaining contractual maturity of investment contract liabilities is included in Note 30 on page 396.

Expected maturity of insurance contract liabilities

(Audited)

	Expected cash flows (undiscounted)				
	Within 1 year	1–5 years	5–15 years	Over 15 years	Total
	$m	$m	$m	$m	$m
Unit-linked	**801**	**1,732**	**2,522**	**2,355**	**7,410**
With DPF and Other contracts	**8,637**	**31,290**	**55,157**	**135,002**	**230,086**
At 31 Dec 2022	**9,438**	**33,022**	**57,679**	**137,357**	**237,496**
Unit-linked	1,346	2,605	3,159	2,293	9,403
With DPF and Other contracts	8,803	31,334	51,891	94,168	186,196
At 31 Dec 2021	10,149	33,939	55,050	96,461	195,599

Insurance underwriting risk

Description and exposure

Insurance underwriting risk is the risk of loss through adverse experience, in either timing or amount, of insurance underwriting parameters (non-economic assumptions). These parameters include mortality, morbidity, longevity, lapse and expense rates. Lapse risk exposure on products with premium financing increased over the year as rising interest rates led to an increase in the cost of financing for customers.

The principal risk we face is that, over time, the cost of the contract, including claims and benefits, may exceed the total amount of premiums and investment income received.

The tables on pages 235 and 236 analyse our life insurance risk exposures by type of contract and by geographical region.

The insurance risk profile and related exposures remain largely consistent with those observed at 31 December 2021.

Sensitivities

(Audited)

The following table shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions across all our insurance manufacturing subsidiaries. These sensitivities are prepared in accordance with current IFRSs, which will change following the adoption of IFRS 17 'Insurance Contracts', effective from 1 January 2023. Further information about the adoption of IFRS 17 is provided on page 335.

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written.

Sensitivity to lapse rates depends on the type of contracts being written. An increase in lapse rates typically has a negative effect on profit due to the loss of future income on the lapsed policies. However, some contract lapses have a positive effect on profit due to the existence of policy surrender charges.

Expense rate risk is the exposure to a change in the allocated cost of administering insurance contracts. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative effect on our profits. This risk is generally greatest for our smaller entities.

Sensitivity analysis

(Audited)

	2022	2021
	$m	$m
Effect on profit after tax and total equity at 31 Dec		
Effect on profit after tax and total equity at 10% increase in mortality and/or morbidity rates	**(105)**	(112)
Effect on profit after tax and total equity at 10% decrease in mortality and/or morbidity rates	**109**	115
Effect on profit after tax and total equity at 10% increase in lapse rates	**(121)**	(115)
Effect on profit after tax and total equity at 10% decrease in lapse rates	**124**	129
Effect on profit after tax and total equity at 10% increase in expense rates	**(89)**	(108)
Effect on profit after tax and total equity at 10% decrease in expense rates	**89**	107

Corporate governance report

HSBC continues to enhance its corporate governance practices and procedures to support the Board's ambition of world-class governance.

The corporate governance report gives details of our Board of Directors, senior management, and Board committees. It outlines key aspects of our approach to corporate governance, including internal control.

It also includes the Directors' remuneration report, which explains our policies on remuneration and their application.

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We have a comprehensive range of policies and systems in place designed to help ensure that the Group is well managed, with effective oversight and control.

The Board

The Board, which seeks to promote the Group's long-term success, deliver sustainable value to shareholders and promote a culture of openness and debate, comprises diverse, high-calibre members who have experience in our global markets.

Chairman and executive Directors

Mark E Tucker (65) ©
Group Chairman
Appointed to the Board: September 2017
Group Chairman since: October 2017

Skills and experience: With over 35 years of experience in financial services in Asia, Africa, the US, the EU and the UK, including 30 years living and working in Hong Kong, Mark has a deep understanding of the industry and markets in which we operate.

Career: Mark was previously Chairman, Group Chief Executive and President of AIA Group Limited ('AIA'), and prior to AIA he was Group Chief Executive of Prudential plc.

Mark previously served as a non-executive Director of the Court of the Bank of England and as an independent non-executive Director of Goldman Sachs Group.

Other appointments:
- Non-executive Chairman of Discovery Limited
- Supporting Chair of Chapter Zero
- Member of the UK Investment Council
- Member of the Advisory Group on Trade Finance to the International Chamber of Commerce
- Member of the Trade Advisory Group on Financial Services to the UK Government's Department for International Trade
- Member of the Asia Business Council
- Chairman of the Multinational Chairman's Group
- Co-Chair of the Indian B20 Taskforce on Financial Inclusion for Economic Empowerment
- Director, Peterson Institute for International Economics
- Director, Institute of International Finance
- Asia Society Board of Trustees

Noel Quinn (61)
Group Chief Executive
Appointed to the Board: August 2019
Group Chief Executive since: March 2020

Skills and experience: Having qualified as an accountant in 1987, Noel has more than 30 years of banking and financial services experience, both in the UK and Asia.

Career: Noel was appointed Group Chief Executive in March 2020, having held the role on an interim basis since August 2019. Since joining HSBC and its constituent companies in 1987, Noel has held a variety of roles including Chief Executive Officer, Global Commercial Banking; Regional Head of Commercial Banking for Asia-Pacific; Head of Commercial Banking UK; and Head of Commercial Finance Europe.

Other appointments:
- Chair of the Financial Services Task Force of the Sustainable Markets Initiative
- Member of the Advisory Council of the Sustainable Markets Initiative
- Founding member of CNBC ESG Council
- Member of the Advisory Board of the China Children Development Fund
- Principal member of the Glasgow Financial Alliance for Net Zero
- Member of the World Economic Forum's International Business Council

Georges Elhedery (48)
Group Chief Financial Officer
Appointed to the Board: January 2023

Skills and experience: Georges has 25 years of experience in the banking industry across Europe, the Middle East and Asia, and has held a number of executive roles at both a regional and global business level.

Career: Georges was appointed Group Chief Financial Officer and executive Director with effect from 1 January 2023. He is also responsible for the oversight of the Group's transformation programme and corporate development activities. Georges was previously co-Chief Executive Officer, Global Banking and Markets and also Head of the Markets and Securities Services division of the business. Georges joined HSBC in 2005 with extensive trading experience in London, Paris and Tokyo. He has since held a number of senior leadership roles, including Head of Global Banking and Markets, Middle East and North Africa; Chief Executive Officer for HSBC, Middle East, North Africa and Türkiye; and Global Head of Markets based in London.

Board committee membership key
- C Committee Chair
- ● Group Audit Committee
- ○ Group Risk Committee
- ○ Group Remuneration Committee
- ● Nomination & Corporate Governance Committee

For full biographical details of our Board members, see www.hsbc.com/who-we-are/leadership-and-governance.

Independent non-executive Directors

Geraldine Buckingham (45) ○ ○ ●
Independent non-executive Director
Appointed to the Board: May 2022

Skills and experience: Geraldine is an experienced executive within the global financial services industry, with significant leadership experience in Asia.

Career: Geraldine is the former Chair and Head of Asia-Pacific at BlackRock, where she was responsible for all business activities across Hong Kong, mainland China, Japan, Australia, Singapore, India and Korea. After stepping down from this role, she acted as senior adviser to the Chairman and Chief Executive Officer of BlackRock. She earlier served as BlackRock's Global Head of Corporate Strategy, and previously was a partner within McKinsey & Company's financial services practice.

Other appointments:
- Independent non-executive Director of Brunswick Group Partnership Ltd
- Member of the Advisory Board of ClimateWorks Centre Australia

Rachel Duan (52) ● ○ ●
Independent non-executive Director
Appointed to the Board: September 2021

Skills and experience: Rachel is an experienced business leader with exceptional international experience in the US, Japan, mainland China and Hong Kong.

Career: Rachel spent 24 years at General Electric ('GE'), where she held positions including Senior Vice President of GE, and President and Chief Executive Officer of GE's Global Markets where she was responsible for driving GE's growth in Asia-Pacific, the Middle East, Africa, Latin America, Russia and the Commonwealth of Independent States. She also previously served as President and Chief Executive Officer of GE Advanced Materials China and then of the Asia-Pacific; President and CEO of GE Healthcare China; and President and CEO of GE China.

Other appointments:
- Independent non-executive Director of Sanofi S.A.
- Independent non-executive Director of AXA S.A.
- Independent non-executive Director of the Adecco Group AG

Dame Carolyn Fairbairn (62) ○ © ●
Independent non-executive Director
Appointed to the Board: September 2021

Skills and experience: Carolyn has significant experience across the media, government and finance sectors, and a deep understanding of the macroeconomic, regulatory, and political environment.

Career: An economist by training, Carolyn has served as a partner at McKinsey & Company, Director-General of the Confederation of British Industry, and held senior executive positions at BBC and ITV plc. She has extensive board experience, having previously served as non-executive Director of Lloyds Banking Group plc, The Vitec Group plc, Capita plc and BAE Systems plc. She has also served as a non-executive Director of the UK Competition and Markets Authority and the Financial Services Authority.

Other appointments:
- Honorary Fellow of Gonville and Caius College, Cambridge
- Honorary Fellow of Nuffield College, Oxford
- Chair of Trustees at Royal Mencap Society

James Forese (59) ○ ○ ●
Independent non-executive Director
Appointed to the Board: May 2020

Skills and experience: James has over 30 years of international business and management experience in the finance industry working in areas including global markets, investment and private banking.

Career: James formerly served as President of Citigroup. He began his career in securities trading with Salomon Brothers, one of Citigroup's predecessor companies, in 1985. In addition to his most recent role as Citigroup's President, he was Chief Executive Officer of Citigroup's Institutional Clients Group. He has held the positions of Chief Executive of its Securities and Banking division and Head of its Global Markets business.

Other appointments:
– Non-executive Chair of HSBC North America Holdings Inc
– Non-executive Chairman of Global Bamboo Technologies
– Trustee of Colby College

Steven Guggenheimer (57) ○ ●
Independent non-executive Director
Appointed to the Board: May 2020

Skills and experience: Steven brings extensive insight into technologies ranging from artificial intelligence to Cloud computing, through his experience advising businesses on digital transformation.

Career: Steven has more than 25 years of experience at Microsoft, where he held a variety of senior leadership roles. These included: Corporate Vice President, Artificial Intelligence and Independent Software Vendor Engagement; and Corporate Vice President, Original Equipment Manufacturer.

Other appointments:
– Independent non-executive Director of BT Group plc
– Independent non-executive Director of Leupold & Stevens, Inc
– Independent non-executive Director of Forrit Holdings Limited
– Independent non-executive Director of Software Acquisition Group

Dr José Antonio Meade Kuribreña (53) ○ ●
Independent non-executive Director
Appointed to the Board: March 2019
Workforce engagement non-executive Director since: June 2022

Skills and experience: José has extensive experience in public administration, banking and financial policy.

Career: José has held Cabinet-level positions in the federal government of Mexico, including as Secretary of Finance and Public Credit, Secretary of Social Development, Secretary of Foreign Affairs and Secretary of Energy. Prior to his appointment to the Cabinet, he served as Undersecretary and as Chief of Staff in the Ministry of Finance and Public Credit. José is also a former Director General of Banking and Savings at the Ministry of Finance and Public Credit, and served as Chief Executive Officer of the National Bank for Rural Credit.

Other appointments:
– Independent non-executive Director of Alfa S.A.B. de C.V.
– Independent non-executive Director of Grupo Comercial Chedraui, S.A.B. de C.V.
– Board member of The Global Center on Adaptation
– Member of the Advisory Board of the University of California, Centre for US Mexican Studies
– Member of the UNICEF Mexico Advisory Board

Eileen Murray (64) ● ●
Independent non-executive Director
Appointed to the Board: July 2020

Skills and experience: Eileen has extensive knowledge in financial services, technology and corporate strategy from a career spanning more than 40 years.

Career: Eileen previously served as co-Chief Executive Officer of Bridgewater Associates, LP. Before this, she was Chief Executive Officer for Investment Risk Management LLC, and President and co-Chief Executive Officer of Duff Capital Advisors. Eileen started her professional career at Morgan Stanley, where she held positions including Controller, Treasurer, and Global Head of Technology and Operations, as well as Chief Operating Officer for its Institutional Securities Group. She was also Head of Global Technology, Operations and Product Control at Credit Suisse.

Other appointments:
- Independent non-executive Director of Guardian Life Insurance Company of America
- Independent non-executive Director of Broadridge Financial Solutions, Inc
- Independent non-executive Director and Chair of Carbon Arc
- Strategic Adviser of Invisible Urban Charging
- Adviser of ConsenSys

David Nish (62) ⓒ ○ ●
Independent non-executive Director
Appointed to the Board: May 2016
Senior Independent non-executive Director since: February 2020

Skills and experience: David has international experience in financial services, corporate governance, strategy, financial reporting, and operational transformation.

Career: David served as Group Chief Executive Officer of Standard Life plc between 2010 and 2015, having joined the company in 2006 as Group Finance Director. He is also a former Group Finance Director of Scottish Power plc and was a partner at Price Waterhouse. David has also previously served as a non-executive Director of HDFC Life (India), Northern Foods plc, Thus plc, London Stock Exchange Group plc, the UK Green Investment Bank plc and Zurich Insurance Group.

Other appointments:
- Independent non-executive Director of Vodafone Group plc
- Honorary Professor of University of Dundee Business School

Jackson Tai (72) ● ⓒ ●
Independent non-executive Director
Appointed to the Board: September 2016

Skills and experience: Jackson has held senior operating and governance roles across Asia, North America and Europe.

Career: Jackson was Vice Chairman and Chief Executive Officer of DBS Group and DBS Bank Ltd, having previously served as Chief Financial Officer and President and Chief Operating Officer. He worked for 25 years in the investment banking division of J.P. Morgan & Co. Incorporated, holding roles as Chairman of the Asia-Pacific Management Committee and Head of Japan Capital Markets. Former non-executive Director appointments included Canada Pension Plan Investment Board, Royal Philips N.V., Bank of China Limited, Singapore Airlines, NYSE Euronext, ING Groep N.V., CapitaLand Ltd, SingTel Ltd. and Jones Lang LaSalle Inc. He also served as Vice Chairman of Islamic Bank of Asia.

Other appointments:
- Independent non-executive Director of Eli Lilly and Company
- Independent non-executive Director of MasterCard Incorporated
- Member of the Advisory Panel of the Russell Reynolds Associates Board and CEO Advisory Group
- Member of the Board of Trustees of the Rensselaer Polytechnic Institute
- Member of the Association of the Metropolitan Opera Board

Aileen Taylor (50)
Group Company Secretary and Chief Governance Officer
Appointed: November 2019

Skills and experience: Aileen is a solicitor with significant governance and regulatory experience across various roles in the banking industry. She is a member of the European Corporate Governance Council, the GC100 and the Financial Conduct Authority's Listing Authority Advisory Panel.

Career: Prior to joining HSBC, Aileen spent 19 years at the Royal Bank of Scotland Group, holding various legal, risk and compliance roles. She was appointed Group Secretary in 2010 and subsequently Chief Governance Officer and Board Counsel.

Former Directors who served during the year

Irene Lee
Irene Lee retired from the Board on 29 April 2022

Pauline van der Meer Mohr
Pauline van der Meer Mohr retired from the Board on 29 April 2022

Ewen Stevenson
Ewen Stevenson resigned from the Board on 31 December 2022

For full biographical details of our Board members, see www.hsbc.com/who-we-are/leadership-and-governance.

Senior management

Senior management, which includes the Group Executive Committee, supports the Group Chief Executive in the day-to-day management of the business and the implementation of strategy.

Elaine Arden (54)
Group Chief Human Resources Officer

Elaine joined HSBC as Group Chief Human Resources Officer in June 2017. Prior to joining HSBC, she was Group Human Resources Director at Royal Bank of Scotland Group for six years. She has held a number of human resources and employee relations roles throughout her career in financial services, including with Clydesdale Bank and Direct Line Group. Elaine is a member of the Chartered Institute of Personnel and Development, and a Fellow of the Chartered Institute of Banking in Scotland.

Colin Bell (55)
Chief Executive Officer, HSBC Bank plc and HSBC Europe

Colin joined HSBC in July 2016 and was appointed Chief Executive Officer, HSBC Bank plc and HSBC Europe in February 2021. He previously held the role of Group Chief Compliance Officer. Before HSBC, Colin worked at UBS as Global Head of Compliance and Operational Risk Control. He served for 16 years in the British Army, where he held a variety of command and staff positions, including within operational tours of Iraq and Northern Ireland, and roles in the Ministry of Defence and NATO.

Jonathan Calvert-Davies (54)
Group Head of Internal Audit

Jonathan is a standing attendee of the Group Executive Committee, having joined HSBC as Group Head of Internal Audit in October 2019. He has 30 years of experience providing assurance, audit and advisory services to the banking and securities industries in the UK, the US and Europe. Jonathan's previous roles included leading KPMG UK's financial services internal audit services practice and PwC's UK internal audit services practice. He also previously served as interim Group Head of Internal Audit at the Royal Bank of Scotland Group.

Greg Guyett (59)
Chief Executive Officer, Global Banking and Markets

Greg joined HSBC in October 2018 as Head of Global Banking and became co-Chief Executive Officer of Global Banking and Markets in March 2020, before assuming sole responsibility in October 2022. Before joining HSBC, he was President and Chief Operating Officer of East West Bank. Greg began his career as an investment banker at J.P. Morgan, where positions included: Chief Executive Officer for Greater China; Chief Executive Officer, Global Corporate Bank; Head of Investment Banking for Asia-Pacific; and Co-Head of Banking for Asia-Pacific.

Dr Celine Herweijer (45)
Group Chief Sustainability Officer

Celine joined HSBC as Group Chief Sustainability Officer in July 2021, and is responsible for the Group's execution of its sustainability strategy. She is also co-chair of the Group's ESG Committee. She was previously a partner at PwC for over a decade, where she held global leadership roles including acting as its global innovation and sustainability leader. Before joining PwC in 2009, Celine worked as Director of Climate Change and Consulting for Risk Management Solutions. She is a World Economic Forum Young Global Leader, a co-chair of the We Mean Business Coalition, a PhD climate scientist and NASA Fellow.

John Hinshaw (52)
Group Chief Operating Officer

John became Group Chief Operating Officer in February 2020, having joined HSBC in December 2019. He has extensive background in transforming and digitising organisations across a range of industries. John was previously Executive Vice President of Technology and Operations and Chief Customer Officer at Hewlett Packard and Hewlett Packard Enterprise, and has held senior executive positions at Verizon and Boeing. John serves on the boards of Sysco Corporation and Illumio, Inc., and has previously served on the boards of BNY Mellon, DocuSign and the National Academy Foundation.

Bob Hoyt (58)
Group Chief Legal Officer

Bob joined HSBC as Group Chief Legal Officer in January 2021. He was previously Group General Counsel at Barclays from 2013 to 2020. Prior to that, he was General Counsel and Chief Regulatory Affairs Officer for PNC Financial Services Group. Bob has served as General Counsel and Senior Policy Adviser to the US Department of the Treasury under Secretary Henry M. Paulson Jr, and as Special Assistant and Associate Counsel to the White House under President George W. Bush.

Steve John (49)
Group Chief Communications and Brand Officer

Steve joined HSBC in December 2019 and was appointed to the Group Executive Committee in April 2021. He has a wealth of senior communications, public policy and leadership experience acquired across a number of multinational and charitable organisations. Steve was previously a partner and Global Director of Communications at McKinsey & Company from 2014 to 2019. He has also held roles with Bupa as Global Director of Corporate Affairs and PepsiCo as Director of Corporate Affairs for their UK and Ireland franchises.

Pam Kaur (59)
Group Chief Risk and Compliance Officer

Pam was appointed Group Chief Risk and Compliance Officer in 2021, having held the position of Group Chief Risk Officer since 2020. Since joining HSBC in 2013, her roles included Group Head of Internal Audit and Head of Wholesale Market and Credit Risk. Pam has also held a variety of audit, compliance, finance and operations roles in the banking industry, including with Deutsche Bank, Royal Bank of Scotland Group, Lloyds TSB and Citigroup. She serves as a non-executive Director of abrdn plc, and was previously a non-executive Director of Centrica plc.

David Liao (50)
Co-Chief Executive Officer, Asia-Pacific – The Hongkong and Shanghai Banking Corporation Limited

David was appointed co-Chief Executive Officer of the Asia-Pacific region in 2021. He is a Director of the Hongkong and Shanghai Banking Corporation Limited, Bank of Communications Co., Limited, and Hang Seng Bank Limited. David joined HSBC in 1997, with previous roles including: Head of Global Banking Coverage for Asia-Pacific; President and Chief Executive of HSBC China; Head of Global Banking and Markets, HSBC China; and Treasurer and Head of Global Markets, HSBC China.

Nuno Matos (55)
Chief Executive Officer, Wealth and Personal Banking

Nuno was appointed Chief Executive Officer of Wealth and Personal Banking in 2021. Since joining HSBC in 2015 from Santander Group, he has held various roles, most recently as Chief Executive Officer of HSBC Bank plc and HSBC Europe. He has also held the positions of Chief Executive Officer of HSBC Mexico and Regional Head of Retail Banking and Wealth Management for Latin America. He is currently a Director of HSBC Global Asset Management Limited.

Stephen Moss (56)
Regional Chief Executive Officer – Middle East, North Africa and Türkiye

Stephen was appointed Regional Chief Executive Officer for the Middle East, North Africa and Türkiye in 2021. He has held a series of roles in Asia, the UK and the Middle East since joining HSBC in 1992, including as Chief of Staff to the Group Chief Executive and overseeing the Group's mergers and acquisitions, and strategy and planning activities. Stephen is a Director of HSBC Bank Middle East Limited, HSBC Middle East Holdings B.V, HSBC Bank Egypt S.A.E., HSBC Saudi Arabia and The Saudi British Bank.

Barry O'Byrne (47)
Chief Executive Officer, Global Commercial Banking

Barry was appointed Chief Executive of Global Commercial Banking in 2020, having served in the role on an interim basis since August 2019. He joined HSBC in 2017 as Chief Operating Officer for Commercial Banking. Before joining HSBC, Barry worked at GE Capital for 19 years where he held a number of senior leadership roles, including Chief Executive Officer and Chief Operating Officer for GE Capital International.

Michael Roberts (62)
Chief Executive Officer, HSBC USA and Americas

Michael was appointed Chief Executive Officer of HSBC USA when he joined HSBC in 2019. He became Chief Executive Officer of the Americas with oversight responsibility for Canada and Latin America in 2021. He is a Director of HSBC Bank Canada; Director, President and Chief Executive Officer of HSBC North America Holdings Inc.; and Chairman of HSBC Bank USA, N.A., HSBC USA Inc and HSBC Latin America Holdings (UK) Limited. Previously, Michael spent over 30 years at Citigroup in a number of senior leadership roles, most recently as Global Head of Corporate Banking and Capital Management and Chief Lending Officer.

Surendra Rosha (54)
Co-Chief Executive Officer, Asia-Pacific – The Hongkong and Shanghai Banking Corporation Limited

Surendra was appointed co-Chief Executive Officer of the Asia-Pacific region in 2021. He is a Director of The Hongkong and Shanghai Banking Corporation Limited, HSBC Global Asset Management Limited and HSBC Bank Malaysia Berhad. Surendra joined HSBC in 1991 and has held several senior positions within Global Banking and Markets, including Head of Global Markets in Indonesia and Head of Institutional Sales, Asia-Pacific. He previously held the position of Chief Executive for HSBC India and Head of HSBC's financial institutions group for Asia-Pacific.

John David Stuart (known as Ian Stuart) (59)
Chief Executive Officer, HSBC UK Bank plc

Ian has been Chief Executive Officer of HSBC UK Bank plc since 2017 and has worked in financial services for over four decades. He joined HSBC as Head of Commercial Banking in the UK and Europe in 2014, having previously led the corporate and business banking businesses at Barclays. He has also held various roles at the Royal Bank of Scotland Group, and started his career at Bank of Scotland. Ian is a business ambassador for Meningitis Now, and a member of the Economic Crime Strategic Board and UK Finance Board.

Additional members of the Group Executive Committee

Noel Quinn

Georges Elhedery

Aileen Taylor

Biographies are provided on pages 240 and 243.

Board and senior management diversity
We value difference

Diversity and inclusion are embedded within the culture of HSBC. The Board remains committed to having an inclusive culture that recognises the importance of gender, social and ethnic diversity, and the benefits gained from different perspectives.

This section outlines the key diversity and inclusion metrics for Board members and executive management as at 31 December 2022. This includes tenure, age, skills and experience, gender and ethnic representation.

Gender and ethnic diversity

The Financial Conduct Authority, in its capacity as the UK Listing Authority, introduced new rules during 2022 that require listed companies to publish information on female and ethnic heritage representation on the Board and in senior management within the *Annual Report and Accounts 2023*. The tables below outline the current gender and ethnic diversity of the HSBC Holdings Board and executive management in advance of these requirements becoming applicable.

Gender

Board

Executive management

	Board members		Number of senior positions[1]	Executive management[2]	
	Number	%		Number	%
Male	8	67	4	17	81
Female	4	33	0	4	19
Other	–	–	–	–	–
Not specified/prefer not to say	–	–	–	–	–

Ethnic diversity

Board

Executive management

	Board members		Number of senior positions[1]	Executive management[2]	
	Number	%		Number	%
White British or other White (including minority-White groups)	9	75	4	14	66
Mixed/multiple ethnic groups	–	–	–	1	5
Asian/Asian British	2	17	–	4	19
Black/African/Caribbean/ Black British	–		–	–	–
Other ethnic group, including Arab	1	8	–	1	5
Not specified/prefer not to say	–		–	1	5

1 Senior positions on the Board comprise the Group Chairman, Group Chief Executive, Group Chief Financial Officer and Senior Independent non-executive Director.

2 Executive management comprises the Group Chief Executive, his direct reports, and the Group Company Secretary and Chief Governance Officer.

Board composition, tenure and age

2 Executive Directors

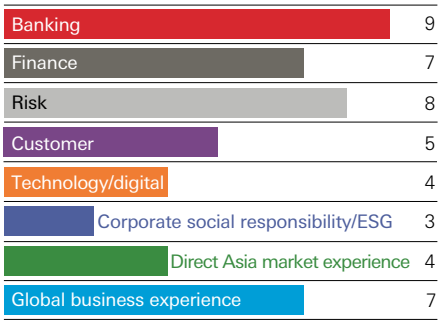
10 Non-executive Directors

Tenure

Age

Skills and experience

The Board, through its Nomination & Corporate Governance Committee, regularly reviews the skills and experience it requires to effectively discharge its responsibilities. A skills matrix, which is a key tool used by the Board to inform its succession planning discussions, is reviewed at least annually by the Board. An extract of the skills matrix, showing a selection of the current skills and experience of the non-executive Directors, is shown below.



How we are governed

We are committed to high standards of corporate governance. The Group has a comprehensive range of policies and procedures in place designed to help ensure that it is well managed, with effective oversight and controls. We comply with the UK Corporate Governance Code and the applicable requirements of the Hong Kong Corporate Governance Code.

Board's role, Directors' responsibilities and meeting attendance

The Board, led by the Group Chairman, is responsible among other matters for:

- promoting the Group's long-term success and delivering sustainable value to shareholders;
- establishing and approving the Group's strategy and objectives, and monitoring the alignment of the Group's purpose, strategy and values with the desired culture;
- setting the Group's risk appetite and monitoring the Group's risk profile;
- approving and monitoring capital and financial resource plans for achieving strategic objectives, including material transactions;
- considering and approving the Group's technology and environmental, social and governance strategies;
- approving the appointment and remuneration of Directors, including Board roles; and
- reviewing the Group's overall corporate governance arrangements.

The Board's responsibilities are set out in a schedule of matters reserved within its terms of reference, which are available on our website at www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities. The Board's powers are subject to relevant laws, regulations and HSBC's articles of association.

The role of the independent non-executive Directors is to support the development of strategy, oversee risk, hold management to account and ensure the executive Directors are discharging their responsibilities properly, while creating the right culture to encourage constructive challenge. Further details on the independence of the Board can be found in the Nomination & Corporate Governance Committee report on page 259. Non-executive Directors also review the performance of management in meeting agreed goals and objectives. The Group Chairman meets with the non-executive Directors without the executive Directors in attendance after Board meetings and otherwise, as necessary.

The roles of Group Chairman and Group Chief Executive are separate. There is a clear division of responsibilities between the leadership of the Board by the Group Chairman, and the executive responsibility for day-to-day management of HSBC's business, which is undertaken by the Group Chief Executive.

The majority of Board members are independent non-executive Directors. At 31 December 2022, the Board comprised the Group Chairman, nine non-executive Directors, and two executive Directors who are the Group Chief Executive and the Group Chief Financial Officer. One non-executive Director will not stand for re-election at the AGM in May 2023.

For further details of Board members' career backgrounds, skills, experience and external appointments, see their biographies on page 240, and for a breakdown of the diversity and skills of the Board and senior management, see page 247.

Operation of the Board

The Board is ordinarily scheduled to meet at least seven times a year. In 2022, the Board held 15 meetings. For further details on attendance at those meetings, see page 250. The Board agenda is agreed by the Group Chairman, working with both the Group Chief Executive and the Group Company Secretary and Chief Governance Officer. For further information, see 'Board activities during 2022' on page 255.

The Group Company Secretary and Chief Governance Officer, the Group Chief Risk and Compliance Officer, the Group Chief Legal Officer and the non-executive Chairman of The Hongkong and Shanghai Banking Corporation Limited are all regular attendees at Board meetings. Other senior executives attend Board meetings for specific items as required.

In addition to formal Board meetings, the Board Oversight Sub-Group met in advance of each Board meeting during 2022. Such meetings were established following the appointment of Noel Quinn as Group Chief Executive and changes to the senior management team as an informal mechanism for a smaller group of Board members and management to discuss emerging issues and upcoming Board matters. Standing attendees comprise the Group Chairman, the Chair of the Group Audit Committee (who is also the Senior Independent Director), the Chair of the Group Risk Committee, the Chair of the Group Remuneration Committee, the Group Chief Executive, the Group Chief Financial Officer, the Group Chief Risk and Compliance Officer, and the Group Company Secretary and Chief Governance Officer. Other non-executive Directors and senior management are invited on an ad hoc basis, depending on the subject matter to be discussed. The forum is not decision making but provides regular opportunities for Board members to communicate with senior management to deepen their understanding of, and provide input into, key issues facing the Group. Following a review by the Group Chairman and Group Chief Executive of the role of the Board Oversight Sub-Group, it was agreed that it would only be used on an ad hoc basis where necessary going forward.

Relationship between the Board and senior management

The Board delegates day-to-day management of the business and implementation of strategy to the Group Chief Executive. The Group Chief Executive is supported in his management of the Group by recommendations and advice from the Group Executive Committee ('GEC'), an executive forum comprising members of senior management that include chief executive officers of the global businesses, regional chief executive officers and functional heads. For further details of the senior management team, see page 244.

The Directors are encouraged to have contact with management at all levels, and have full access to all relevant information. Non-executive Directors are encouraged to visit local business operations and meet local management when they attend Board meetings in different locations, and when travelling for other reasons. Board and senior management travel resumed in 2022, which allowed for more opportunities for Board members to meet together in person and with key stakeholders. As Covid-19 restrictions remained in place for some markets, and with the safety of colleagues and customers a priority, several virtual meetings with senior executives continued to take place, which included business meetings, induction meetings and subject matter 'deep dives'.

Executive governance

The Group's executive governance is underpinned by the Group operating rhythm, which helps facilitate end-to-end governance between senior leadership and the Board, and sets out the Board and executive engagement schedule.

The Group operating rhythm has the following three pillars:

- The GEC normally meets every week to discuss current and emerging issues.
- On a monthly basis, the GEC reviews the performance of each of the global businesses in principal geographical areas and legal entities. These performance reviews are supplemented by operating unit performance review meetings between the Group Chief Financial Officer and each of the chief executive officers of the respective global businesses, regions and principal subsidiaries. The Group Chief Risk and Compliance Officer usually attends these meetings.
- The GEC holds a strategy and governance meeting two weeks in advance of each Board meeting.

In addition, during the year, the Group Chief Executive independently conducts several business reviews on focus areas such as costs and the financial reporting plan.

Separate committees have been established to provide specialist oversight for matters delegated to the Group Chief Executive and senior management. For further details of these committees, see page 251.

To further support our senior management, we have dedicated corporate governance officers supporting our global businesses and global functions to assist in effective end-to-end governance, consistency and connectivity.

Subsidiary governance

We are committed to maintaining high standards of corporate governance throughout the Group. All subsidiary boards and their respective businesses are required to have in place effective governance arrangements with regard to the businesses' nature, size, locations and the sectors in which they operate.

Certain subsidiaries are designated formally as principal subsidiaries by approval of the Board. In addition to their obligations under their respective local laws and regulation, principal subsidiaries, supported by regional company secretaries, perform an important role in supporting effective and high standards of governance across the Group.

The designated principal subsidiaries are:

Principal subsidiary	Oversight responsibility
The Hongkong and Shanghai Banking Corporation Limited	Asia-Pacific
HSBC Bank plc	Europe, Bermuda (excluding Switzerland and UK ring-fenced activities)
HSBC UK Bank plc	UK ring-fenced bank and its subsidiaries
HSBC Middle East Holdings BV	Middle East, North Africa and Türkiye
HSBC North America Holdings Inc.	US
HSBC Latin America Holdings (UK) Limited	Mexico and Latin America
HSBC Bank Canada[1]	Canada

1 *On 29 November 2022 HSBC announced it had entered into an agreement to sell HSBC Bank Canada, subject to regulatory and governmental approvals. The sale is expected to complete in late 2023.*

Principal subsidiaries play a critical role in overseeing the implementation of the subsidiary accountability framework in the regions for which they are responsible. The subsidiary accountability framework, refreshed by the Board in 2021, aims to provide subsidiaries with a shared understanding and a consistent approach towards the Group's strategic objectives, culture and values, and ensure that corporate governance best practice is applied throughout. The framework sets clear overarching principles for subsidiaries to follow to improve communications and connectivity within the Group.

It also focuses on ensuring that each subsidiary is led by an effective board with an appropriate balance of skills, diversity, experience and knowledge, having regard to the nature of the subsidiary's business and any local legal and regulatory requirements. Board composition of the Group's subsidiaries is kept under review as part of succession planning.

The framework is subject to periodic review by the Board and/or its Nomination & Corporate Governance Committee and is updated to ensure that there is clarity for the directors and officers of their respective roles and responsibilities.

Since the revised framework was implemented in 2021, there has been a notable improvement in the diversity of subsidiary board composition.

To continue this progress, HSBC in 2022 launched a Bank Director Programme to develop and equip internal talent to undertake non-executive employee director roles on subsidiary boards. This programme is delivered in partnership with an external business school, and provides certified qualifications to its participants in becoming highly skilled and knowledgeable subsidiary director candidates.

The Group Chairman interacts regularly with the chairs of the principal subsidiaries, including through the Chairman's Forum, which brings together the chairs of the principal subsidiaries and the chairs of the Group's audit, risk and remuneration committees, and depending on the topic for discussion, also the Group Chief Executive, non-executive Directors and relevant executive management, advisers and/or external experts. In 2022, the Chairman's Forum covered strategic business considerations, geopolitics, global public health, liability pricing, shareholder engagements, ESG insights, delegations of authority, employee engagement and financial performance. The Non-Executive Director Summits, hosted by the Group Chairman, are also effective subsidiary directors' engagement events.

During 2022, the Group Chairman hosted two virtual Non-Executive Director Summits in March and September, where approximately 180 independent non-executive directors from the Group's subsidiaries attended along with HSBC Holdings Board Directors. The summits provide a platform for sharing key messages across subsidiaries, as well as facilitating greater connectivity and helping to build a sense of community among our subsidiaries' non-executive directors. In 2022, the non-executive directors received updates on Group-wide matters including strategy, ESG issues, technology and governance.

The annual Remuneration Committee Chairs' Forum took place in November, and provided the principal subsidiary chairs with an opportunity to discuss the Group's performance and the Group Remuneration Committee's priorities. A follow-up forum was held in late November to provide transparency around pay outcomes and allocation, with feedback from the discussion used to shape the final pay proposals, which were considered and approved by the Group Remuneration Committee.

Board members attend principal subsidiary meetings as guests from time to time. Similarly, principal subsidiary directors are invited to attend committee meetings at Group level, where relevant. The chairs of the principal subsidiary risk committees are regular attendees at the Group Risk Committee. Similarly, the Group Audit Committee Chair meets regularly with the principal subsidiary audit committee chairs to promote the sharing of information and best practices. These Group Board committees received escalated reports and certifications from the principal subsidiary risk and audit committees through the year.

Board roles, responsibilities and meeting attendance

The table below sets out the Board members' respective roles, responsibilities and attendance at Board meetings and the AGM in 2022. For a full description of key Board members' responsibilities, see www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities.

Roles	Board attendance in 2022	Responsibilities
Group Chairman Mark E Tucker[1,2]	15/15	• Provides effective leadership of the Board and promotes the highest standards of corporate governance practices. • Leads the Board in providing strong strategic oversight and setting the Board's agenda, culture and values. • Leads the Board in challenging management's thinking and proposals, and fosters open and constructive debate among Directors. • Maintains internal and external relationships with key stakeholders, and communicates investors' views to the Board. • Organises periodic monitoring and evaluation, including externally facilitated evaluation, of the performance of the Board, its committees and individual Directors. • Leads on succession planning for the Board and its committees, ensuring appointments reflect diverse cultures, skills and experiences.
Executive Director **Group Chief Executive** Noel Quinn[2]	15/15	• Leads and directs the implementation of the Group's business strategy, embedding the organisation's culture and values. • Leads the Group Executive Committee with responsibility for the day-to-day operations of the Group, under authority delegated to him from the Board. • Maintains relationships with key internal and external stakeholders including the Group Chairman, the Board, customers, regulators, governments and investors. • Maintains responsibility and accountability for the Group's and its employees' compliance with applicable laws, codes, rules and regulations, good market practice and HSBC's own standards.
Executive Director **Group Chief Financial Officer** Ewen Stevenson[2,4,6]	14/15	• Supports the Group Chief Executive in developing and implementing the Group strategy and recommends the annual budget and long-term strategic and financial resource plan. • Leads the Finance function and is responsible for effective financial reporting, including the effectiveness of the processes and controls, to ensure the financial control framework is robust and fit for purpose. • Maintains relationships with key stakeholders including shareholders.
Non-executive Director **Senior Independent Director** David Nish[2,3]	15/15	• Supports the Group Chairman, acting as intermediary for non-executive Directors when necessary. • Leads the non-executive Directors in the oversight of the Group Chairman, supporting the clear division of responsibility between the Group Chairman and the Group Chief Executive. • Listens to shareholders' views if they have concerns that cannot be resolved through the normal channels.
Non-executive Directors		• Develop and approve the Group strategy. • Challenge and oversee the performance of management. • Approve the Group's risk appetite and review risk profile and performance. • Contribute to the assessment and monitoring of culture. • Maintain internal and external relationships with the Group's key stakeholders.
Geraldine Buckingham[3,5]	9/9	
Rachel Duan[2,3]	15/15	
Dame Carolyn Fairbairn[2,3]	15/15	
James Forese[2,3,6]	14/15	
Steven Guggenheimer[2,3]	14/15	
Irene Lee[2,4]	6/6	
Dr José Antonio Meade Kuribreña[2,3]	15/15	
Eileen Murray[2,3,6]	14/15	
Jackson Tai[2,3]	15/15	
Pauline van der Meer Mohr[2,3,4,6]	4/6	
Group Company Secretary and Chief Governance Officer Aileen Taylor		• Maintains strong and consistent governance practices at Board level and throughout the Group. • Supports the Group Chairman in ensuring effective functioning of the Board and its committees, and transparent engagement between senior management and non-executive Directors. • Facilitates induction and professional development of non-executive Directors. • Advises and supports the Board and management in ensuring effective end-to-end governance and decision making across the Group.

1 *The non-executive Group Chairman was considered to be independent on appointment.*
2 *Attended the AGM on 29 April 2022.*
3 *Independent non-executive Director. All of the non-executive Directors are considered to be independent of HSBC. There are no relationships or circumstances that are likely to affect any individual non-executive Director's judgement. All non-executive Directors have confirmed their independence during the year.*
4 *Irene Lee and Pauline van der Meer Mohr retired from the Board on 29 April 2022. Ewen Stevenson retired from the Board on 31 December 2022.*
5 *Geraldine Buckingham joined the Board effective 1 May 2022.*
6 *Due to prior commitments Eileen Murray and Pauline van der Meer Mohr were not able to attend on 28 March 2022 and Steven Guggenheimer on 2 November 2022. Meetings held on 10 February 2022 and 25 November 2022 were ad hoc meetings called at short notice, and due to prior commitments, James Forese and Pauline van der Meer Mohr were unable to attend on 10 February 2022 and Ewen Stevenson was unable to attend on 25 November 2022.*

Board committees and working groups

The Board delegates oversight of certain audit, risk, remuneration, nomination and governance matters to its committees. Each standing Board committee is chaired by a non-executive Board member and has a remit to cover specific topics in accordance with their respective terms of reference. Only the Group Chairman and the independent non-executive Directors are members of Board committees. Details of the work carried out by each of the Board committees can be found in the respective committee reports from page 259.

The Chairman's Committee provides the Board with the opportunity to consider ad hoc and routine matters between scheduled Board meetings. All Board members are invited to attend Chairman's Committee meetings.

In addition to Board committees, working groups have been established to enhance Board governance, when appropriate, including the Board Oversight Sub-Group and the Technology Governance Working Group, which were first convened in 2019 and 2021, respectively. For further details of these committees, see page 248 and the box below.

The Group Executive Committee has established a number of committees to provide specialist oversight for matters delegated to the Group Chief Executive and senior management, which help fulfil their responsibilities under the Senior Managers and Certification Regime.

These committees support the Group Chief Executive and senior management in areas such as capital and liquidity, risk management, disclosure and financial reporting, restructuring and investment considerations, transformation oversight, ESG matters and talent and development.

Board

Chair: Mark Tucker

Chairman's Committee	Nomination & Corporate Governance Committee	Group Audit Committee	Group Risk Committee	Group Remuneration Committee	Informal governance
Chair: Mark Tucker	*Chair: Mark Tucker*	*Chair: David Nish*	*Chair: Jackson Tai*	*Chair: Dame Carolyn Fairbairn*	**Board Oversight Sub-Group** Chair: Mark Tucker
	See page 259	*See page 262*	*See page 271*	*See page 276*	**Technology Governance Working Group** *Co-Chairs: Eileen Murray and Steven Guggenheimer*

Group Executive Committee

Chair: Noel Quinn

Acquisitions and Disposals Committee	Disclosure and Controls Committee	Environmental, Social and Governance Committee	Group People Committee	Group Risk Management Meeting	Holdings Asset and Liability Committee	Transformation Oversight Executive Committee
Chair: Noel Quinn	*Chair: Ewen Stevenson*[1]	*Co-Chairs: Celine Herweijer and Aileen Taylor*	*Chair: Elaine Arden*	*Chair: Pam Kaur*	*Chair: Ewen Stevenson*[1]	*Chair: Ewen Stevenson*[1]

1 *Georges Elhedery took over as chair from 1 January 2023.*

ESG governance

With ESG issues rising up the global agenda, including with the transition to a sustainable economy, we understood the need to embed ESG considerations more deeply into our governance processes. In February 2021, the Board approved the establishment of an executive level ESG committee to support senior management in the delivery of the Group's ESG strategy and development of key policies. The ESG Committee also aims to track the Group's progress against material commitments by providing holistic oversight, coordination and management of ESG activities. The ESG Committee is jointly chaired by the Group Chief Sustainability Officer and the Group Company Secretary and Chief Governance Officer. The committee oversees all areas of environmental, social and governance issues, with support from accountable senior management in relation to their particular areas of responsibilities. Key representatives from the functions and global businesses attend to provide insights on the implementation of the ESG strategy across the Group, allowing the ESG Committee to make recommendations to the Board in respect of ESG matters.

Technology governance

The Technology Governance Working Group was established by the Board in early 2021 to enhance its oversight of technology strategy, governance and emerging risks, as well as to strengthen connectivity with the principal subsidiaries. The role of the working group is regularly reviewed by the Board. It was agreed in January 2022 that it should continue as an informal committee of the Board for the duration of 2022, and it was extended for a further 12 months in January 2023. The working group continues to be jointly chaired by two of the Board's non-executive Directors, Eileen Murray and Steven Guggenheimer, and members include the Group Risk Committee chair and other non-executive Directors representing our US, UK, European and Asian principal subsidiaries. The working group met formally six times in 2022. These meetings included deep dives on key strategic business initiatives, as well as updates on technology strategy implementation and cybersecurity matters, with attendance from key technology and business stakeholders. There were a number of joint sessions between the working group, the Group Audit Committee and the Group Risk Committee. For further details of these sessions, see pages 262 and 271.

Board induction and training

The Group Company Secretary and Chief Governance Officer works with the Group Chairman to ensure that all Board members receive appropriate training, both individually and collectively, throughout their time on the Board. On appointment, new Directors are provided with tailored and comprehensive induction programmes to fit with their individual experiences and needs, including the process for managing conflicts.

During 2022, we welcomed one new non-executive Director, Geraldine Buckingham, to our Board. In October, we also announced that Ewen Stevenson would be stepping down as Group Chief Financial Officer on 31 December 2022 and be replaced by Georges Elhedery. Georges Elhedery's induction programme commenced upon announcement of his proposed appointment, which included a detailed handover prepared by the Group Chief Financial Officer prior to Georges commencing the role from 1 January 2023.

The induction programme is delivered through formal briefings and introductory sessions with other Board members, senior management, legal counsel, auditors, tax advisers and regulators, as appropriate. Topics covered in the induction programme include, but are not limited to: purpose and values; culture and leadership; governance and stakeholder management; Directors' legal and regulatory duties; recovery and resolution planning; anti-money laundering and anti-bribery; technical and business briefings; and strategy.

Where possible, the induction process is initiated before appointment to allow each new Board member to contribute meaningfully from appointment. The structure of the induction supports good information flows within the Board and its committees, as well as between senior management and non-executive Directors, providing a clear understanding of our culture and way of operating.

For illustrations of typical induction modules, see the 'Directors' induction and ongoing development in 2022' table below.

Directors undertook routine training during 2022 in subject matters that included: the risk management framework; financial crime; and health, safety and well-being. They were provided training by external counsel on their obligations when handling confidential and sensitive information. The Directors also participated in 'deep dive' sessions into specific areas of the Group's strategic priorities, risk appetite, approach to managing certain risks, climate-aligned finance and market abuse regulations. These training sessions included external consultants who provided insights into geopolitical matters, macroeconomics and investor sentiments. Other topics of focus included: operations and technology strategy; the resolvability assessment framework; and climate change and sustainability.

Non-executive Directors also discussed individual development areas with the Group Chairman during performance reviews and in conversations with the Group Company Secretary and Chief Governance Officer. The Group Company Secretary and Chief Governance Officer makes appropriate arrangements for any additional training needs identified using internal resources, or otherwise, at HSBC's expense.

Members of Board committees receive relevant training as appropriate. Directors may take independent professional advice at HSBC's expense.

Board Directors who serve on principal subsidiary boards receive training that is pertinent to circumstances and context relevant to those boards. Opportunities exist for the principal subsidiary committee chairs to share their understanding in specific areas with the Board Directors as part of the Chairman's Forum.

Directors' induction and ongoing development in 2022

Director	Induction[1]	Strategy and business briefings[2]	Risk and control[3]	Corporate governance, ESG and other reporting matters[4]	Board global mandatory training[5]	Chair and subsidiary non-executive Director forums[6]
Geraldine Buckingham	●	●	●	●	●	●
Rachel Duan	○	●	●	●	●	●
Dame Carolyn Fairbairn	○	●	●	●	●	●
James Forese	○	●	●	●	●	●
Steven Guggenheimer	○	●	●	●	●	●
José Antonio Meade Kuribreña	○	●	●	●	●	●
Eileen Murray	○	●	●	●	●	●
David Nish	○	●	●	●	●	●
Noel Quinn	○	●	●	●	●	●
Ewen Stevenson	○	●	●	●	●	●
Jackson Tai	○	●	●	●	●	●
Mark Tucker	○	●	●	●	●	●

● *Matter considered* ○ *Matter not considered*

1 *The induction programme was delivered through formal briefings and introductory sessions with Board members, senior management, legal counsel, auditors, tax advisers and regulators, as appropriate. Topics covered included, but were not limited to: purpose and values; culture and leadership; governance and stakeholder management; Directors' legal and regulatory duties; recovery and resolution risk; anti-money laundering and anti-bribery; technical and business briefings; and strategy.*

2 *Directors participated in business strategy, market development and business briefings, which are global, regional and/or market-specific. Examples of specific sessions held in 2022 included: 'Sustainability operating model', 'Implications from the Russia-Ukraine conflict' and 'Strategy execution of Asia wealth'.*

3 *Directors received risk and control training and briefings. Examples of specific sessions held in 2022 included: 'Interest rate risk of the banking book strategy' and 'ICAAP/ILAAP'.*

4 *All Directors received training on topics such as: 'Resolvability assessment framework', 'Climate-aligned finance', 'Data literacy' and 'Cyber ransomware'.*

5 *Global mandatory training, issued to all Directors, mirrored training undertaken by all employees, including senior management. This included: management of risk under the risk management framework; cybersecurity risk; health, safety and well-being; sustainability; financial crime, including understanding money laundering, terrorist financing, tax, sanctions, fraud and bribery and corruption risks; our values, including workplace harassment; and data privacy and the protection of data of our customers and colleagues.*

6 *These included the Chairman's Forum, Remuneration Committee Chairs' Forum and the Non-Executive Director Summits.*

Board stakeholder engagement during 2022

The Board is committed to engaging with key stakeholders, including colleagues, and welcomed the increased focus on bringing the employee voice into the boardroom, as envisaged by the revisions made to the UK Corporate Governance Code in 2018.

The Board had previously decided that, given HSBC's size, scale and geographical spread, the 'alternative arrangements' approach for workforce engagement under the UK Corporate Governance Code was the suitable option. The Board reviews this annually, and in light of the challenges facing the organisation and colleagues from factors outside of HSBC's control, including the Covid-19 pandemic, decided to strengthen its practices through the introduction of a non-executive Director with designated responsibility for workforce engagement. It was agreed by the Board's Nomination & Corporate Governance Committee in May 2022 to appoint José Meade to the new role of dedicated workforce engagement non-executive Director. This approach assists with the employee voice being heard in Board discussions and helps inform decision making.

The appointment of a designated workforce engagement non-executive Director does not restrict other Board members from engaging with the workforce, particularly as it is not possible for one person to represent the diversity of views across the entirety of the Group. It remains the responsibility of all Directors to consider stakeholder views, including employees.

The programme of workforce engagement for 2022 continued to be delivered through a variety of interaction styles, both in person and virtually, to accommodate the breadth of experience, geographical spread and range of seniority of our employees. Such activities included bespoke sessions with smaller groups, formal presentations and Q&A opportunities. These engagements were designed to promote and deliver open dialogue and two-way discussions between Directors and colleagues, allowing the Board to gain valuable insight on employee perspectives. This in turn informed Directors' deliberations and decision making in Board and committee meetings.

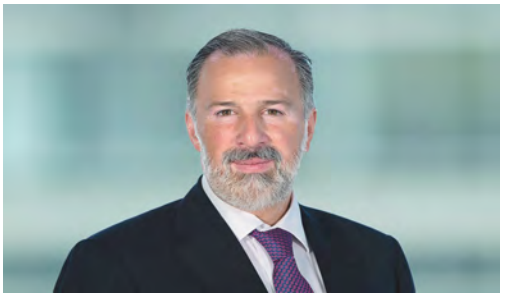
To help inform the Board of employee initiatives and sentiment and allow the Board to plan for future engagement activities, Directors received regular workforce engagement papers at Board meetings. The Board's agenda also regularly included non-executive Director workforce and other stakeholder engagement updates. These updates were addressed in the Group Chief Executive's Board report and the Group Chief Human Resources Officer's report on employee views and sentiment, particularly around employee Snapshot surveys. The Chairman's Forum meetings also discussed employee feedback from the Group's subsidiaries and received workforce engagement updates from each of the principal subsidiary chairs.

Engagement activity between the Board and the wider workforce included meetings and events between representatives of the eight employee resource groups and the non-executive Directors who have been designated to support them. These included:

- a virtual Nurture event with working parents and carers, which reflected on the HSBC colleague survey and how more relevant data could be captured and actioned;
- two Pride events with our LGBTQ+ colleagues, during which participants shared their thoughts, explored what Pride had achieved, discussed future opportunities and considered how Directors could advocate and support the work of Pride; and
- an in-person event with employee resource group leaders based in Hong Kong to discuss what motivates them to be employee resource group leaders, share achievements and discuss opportunities to align outcomes across the Group.

For more examples of how the Board has engaged with the workforce and other stakeholders see 'Board decision making and engagement with stakeholders' on page 20.

Workforce engagement non-executive Director



"I was pleased when the Board took the decision to create this role and asked me to assume the position of workforce engagement non-executive Director. Our colleagues, and the culture we promote, are key to our success in achieving our purpose of opening up a world of opportunity.

My role and responsibilities, summarised in the chart below, are clear, but I appreciate that given the scale of our organisation, and the newness of this responsibility, it is critical that I execute this role with focus and intent to understand the employee voice, and communicate this to the Board. Notwithstanding the challenges, I am dedicated to do what I can to meet and speak with a broad spectrum of our people, across global businesses, regions and functions.

With the easing of Covid-19 restrictions in 2022, and as the Board resumed travel for meetings, I used these opportunities to connect with employees on a number of topics. Each experience has been enlightening and I am encouraged to see how common themes and reflections are being addressed.

While I cannot represent and hear every employee voice, I will endeavour to listen to what our colleagues are saying around the world. With a dedicated plan of action for 2023, I see this role evolving such that I will be able to add value to – and help drive more in-depth Board discussions on – topics that affect our people.

I look forward to reporting in the future on the progress made."

Dr José Antonio Meade Kuribreña

Workforce engagement non-executive Director

Lunch with graduates

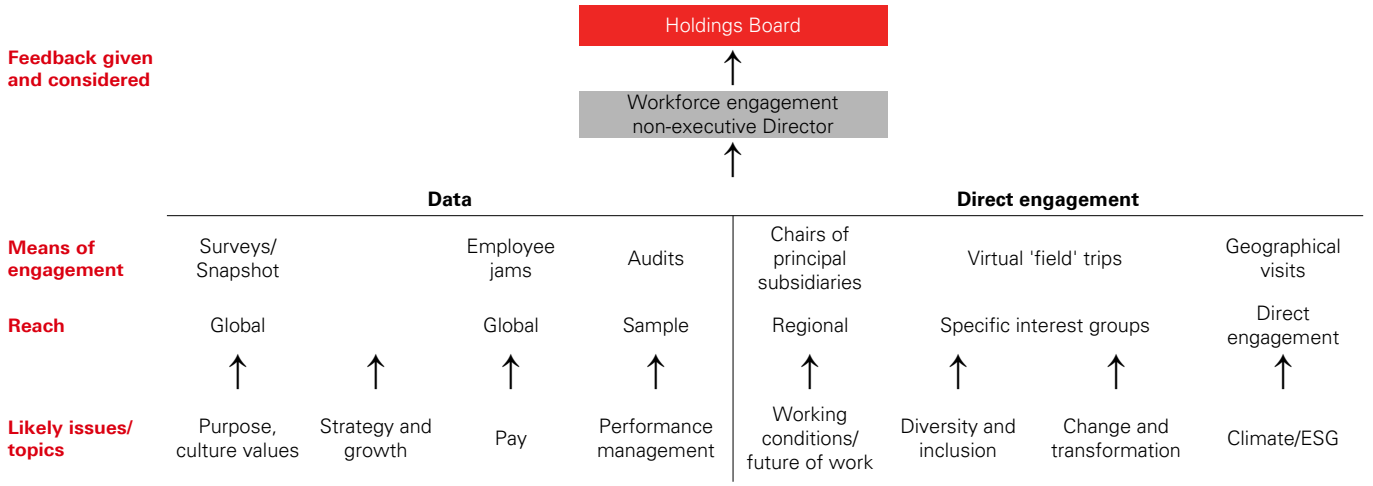
Mexico City, HSBC Tower

July 2022

Role of the workforce engagement non-executive Director at a glance

Headline responsibilities:

- Engages, understands, represents colleagues globally.
- Receives employee perspectives through formal and informal engagement.
- Represents the employee voice at Board meetings for consideration during decision making.



Activities during 2022

José Meade's appointment was announced to the workforce jointly by the Group Chairman and Group Chief Executive on 1 June 2022. This was positively received by colleagues, several of whom reached out directly to José with engagement ideas.

Since his appointment, José has undertaken a variety of engagements in his role including:

Employee views – Mexico, US, India, UK, Hong Kong, Argentina, Brazil, Chile and Uruguay
In the weeks immediately following his appointment, José had 25 meetings with colleagues in nine countries, in person and virtually, across most areas of the Group. Topics discussed included: the need for continued focus on areas such as well-being, and diversity and inclusion; and enhancement of technology. Following such discussions, several suggestions were made, including strengthening employee retention strategies, increasing career ownership within teams and improving information gathering analysis and dissemination following exit interviews to relevant colleagues in the Group.
Graduates – Mexico, US
During the year, José met with Mexican graduates in person and US graduates virtually to share experiences of HSBC's graduate programme.
GBM – UK
José participated in an in-person meeting with a diverse group of Global Banking colleagues in London to share experiences and views on people matters, women in finance, diversity and inclusion, and career development.
Global Service Centre – Mexico
José joined colleagues for a meeting with Global Service Centre employees to understand their perspective on working life.
Employee resource groups – Global
José participated in the virtual annual employee resource group summit and heard about the groups' leaders' successes and challenges. He connected with representatives in the UK, Mexico, India, Dubai, Hong Kong, Singapore and the US.
Employee resource groups – Dubai
José joined an in-person meeting with the chapter leads of the five employee resource groups active in MENA (Ability, Balance, Embrace, Generations and Nurture).

Visit to Global Service Centre, Mexico City, Tecnoparque

October 2022

Engagement highlights

65

Sessions attended by executive and/or non-executive Directors

1,500+

Number of employees engaged

38

Sessions attended by workforce engagement non-executive Director

600+

Number of employees engaged by workforce engagement non-executive Director

12+

Countries of engagement

73%

Highest employee engagement survey response

Priorities for 2023

- Review opportunities with Human Resources to ensure the right insight is being gained from employees to support and better inform the Board when taking decisions.
- Attend six larger-scale employee engagement events aligned to Board meeting agenda items to foster debate and discussion.
- Plan further international employee engagement opportunities in addition to the Board travel plans.

Board activities during 2022

During 2022, the Board remained focused on HSBC's strategic direction, overseeing performance, and risk. It considered performance against financial and other strategic objectives, key business challenges, emerging risks, business development, investor relations and the Group's relationships with its stakeholders. The end-to-end governance framework facilitated discussion on strategy and performance by each of the global businesses and across the principal geographical areas, which enabled the Board to support executive management with its delivery of the Group's strategy.

The Board's key areas of focus in 2022 are set out by theme below.

Strategy and business performance

The Group's strategy remains focused on increasing returns for investors, creating capacity for future investment and building a sustainable platform for growth. In 2022, each Board meeting featured the Group's strategic performance on its agenda, facilitating opportunities to track its delivery throughout the year, and providing opportunity to shape how it was developed. The Board reviewed progress within the Group's global businesses and regions, as well as against its four strategic pillars of: focus on our strengths, digitise at scale, energise for growth and transition to net zero.

The Group's strategic transformation programme came to a formal conclusion in December 2022, having delivered against its objectives to reshape underperforming businesses, simplify the organisation, reduce costs and reallocate risk-weighted assets. Transformation remains a key business focus as it is embedded throughout the organisation and its operations.

Environmental, social and governance

In 2020, the Group announced a climate ambition to align its financed emissions to net zero by 2050, and to become net zero in its own operations and supply chain by 2030. The Group aims to achieve this by supporting clients' transition to a net zero carbon economy and focusing on sustainable finance opportunities, as well as by reducing the carbon emissions in its own operations.

The Board takes overall responsibility for ESG strategy, overseeing executive management in developing the approach, execution and associated reporting. The Board considered whether to establish a Board committee dedicated to ESG issues, but instead decided that the best way to support the oversight and delivery of the Group's climate ambition and ESG strategy was to retain governance at Board level. The Group Executive Committee enhanced its governance model of ESG matters with the introduction of a dedicated ESG Committee and supporting forums. These support senior management in the delivery of the Group's ESG strategy, key policies and material commitments by providing oversight over – and management and coordination of – ESG commitments and initiatives.

In 2022, the Board oversaw the implementation of ESG strategy through regular dashboard reports and detailed updates including: reviews of net zero policies, financed emissions target setting and climate-aligned financing initiatives.

Financial decisions

The Board and its dedicated committees approved key financial decisions throughout the year, including the *Annual Report and Accounts 2021*, the *Interim Report 2022* and the first quarter and the third quarter *Earnings Releases*.

At the end of 2021, the Board approved the 2022 financial resourcing plan. The Board monitored the Group's performance against the approved plan, as well as the plans of each of the global businesses. The Board also approved the renewal of the debt issuance programme. In December 2022, the Board approved the financial resourcing plan for 2023.

The Board adopted a dividend policy designed to provide sustainable cash dividends, while retaining the flexibility to invest and grow the business in the future, supplemented by additional shareholder distributions, if appropriate. For the financial year 2022, we achieved a dividend payout ratio within our 2022 target range of between 40% and 55% of reported earnings per ordinary share ('EPS'). As previously communicated, given our current returns trajectory, we are establishing a dividend payout ratio of 50% of reported earnings per share for 2023 and 2024, excluding material significant items (including the planned sale of our retail banking operations in France and the planned sale of our banking business in Canada).

On 22 February 2022, we announced an interim dividend of $0.18 per share for the 2021 full-year, and on 1 August 2022 we announced an interim dividend of $0.09 per share for the 2022 half-year. For further details of dividend payments, see page 418.

Risk, regulatory and legal considerations

The Board, advised by the Group Risk Committee, promotes a strong risk governance culture that shapes the Group's risk appetite and supports the maintenance of a strong risk management framework, giving consideration to the measurement, evaluation, acceptance and management of risks, including emerging risks.

The Board considered the Group's approach to risk including its regulatory obligations. A number of key frameworks, control documents, core processes and legal responsibilities were also reviewed and approved as required by the Board and/or its relevant committees. These included:

- the Group's risk appetite framework and risk appetite statement;
- the individual liquidity adequacy assessment process;
- the individual capital adequacy assessment process;
- the Group's obligations under the Modern Slavery Act and approval of the Modern Slavery and Human Trafficking Statement;
- stress testing and capabilities required to meet the PRA's resolvability assessment framework;
- the revised terms of reference for the Board and Board committees; and
- the Group's revised delegation of authority policy.

The Board also reviewed and monitored the implications of geopolitical and macroeconomic developments during the year.

Technology

Throughout the year, the Board received regular updates on technology from the Group Chief Operating Officer, including on the implementation of the technology strategy and key strategic business initiatives. As technology is crucial to help deliver the Group's strategic objectives, including the strategic pillar 'Digitise at scale', strategy papers covered technology issues throughout the year. In December, the Board discussed a digital technology map, a new tool that could help simplify, prioritise and drive change in the Group's technology estate. For further details, see 'Principal decisions' on page 22.

The Technology Governance Working Group continued to oversee and enhance the Group's governance of technology. For further details of this working group, see page 251.

People and culture

The Board continued to dedicate time in its meetings to discuss people-related and culture-related topics, to help raise its awareness of employee and other stakeholder perspectives. The Board is committed to setting the right cultural tone, with each Board meeting beginning with a 'culture moment', which includes observations of behaviours within the Group aligned to its purpose and values.

Group subsidiary directors' approaches to workforce engagement were presented by each of the chairs from the principal subsidiaries to the Chairman's Forum, where they discussed their respective board engagement activities with the workforce, as well as what they learned as part of such engagements and other cultural insights. The

Board also receives insights from the all-employee Snapshot survey, which measures employee sentiment. A culture insights report, developed in 2021, provides the Board with key data indicators, such as behaviours, sentiment, business outcomes and people to allow it to monitor culture across the Group.

Board engagement with management and the wider workforce continued to remain a strong area of attention, particularly with the appointment of a dedicated workforce engagement non-executive Director. For further details of the work of the workforce engagement non-executive Director, see page 253.

Governance

The Board continued to oversee the governance, smooth operation and oversight of the Group and its principal and material subsidiaries.

The Board and senior management supported improvements to governance initiatives to encourage simplification and promote effective decision making in the business. Such improvements included making refinements to Board and committee paper templates, and reducing unnecessary committee meetings to free management time and encourage individual accountability and decision taking.

During the year, Pauline van der Meer Mohr and Irene Lee retired as independent non-executive Directors, and Ewen Stevenson resigned as Group Chief Financial Officer. The Board appointed Geraldine Buckingham as an independent non-executive Director in May 2022, and Georges Elhedery as Group Chief Financial Officer from 1 January 2023. The Board, supported by the Nomination & Corporate Governance Committee, reviews the skills and experience of the Board on an ongoing basis. This ensures that the Board and its committees comprise the necessary skills, diversity, experience and competencies to discharge their responsibilities effectively. For further details of the review and changes to the Board, see the Nomination & Corporate Governance report on page 259. For further details of diversity of the Board, see page 247.

The Board monitored its compliance with the UK Corporate Governance Code, the Hong Kong Corporate Governance Code and the Companies Act 2006 throughout the year.

Board engagements with shareholders

In 2022, Board members remained responsive to shareholder requests to engage, and certain of the Board met with key investors including Ping An Asset Management Co. Ltd. The Group Chairman and the Senior Independent Director, often with the Group Company Secretary and Chief Governance Officer, engaged with a number of our large institutional investors in 19 meetings. The Group Chief Executive and the Group Chief Financial Officer, together and separately, attended over 100 meetings with investors. Key topics included our financial performance, updates on strategy and market presence, geopolitical risks and the macroeconomic outlook in key geographies.

The Group Remuneration Committee Chair also met with key investors and proxy advisory firms during the fourth quarter of 2022. These sessions provided useful insight into investor views on key areas of decision making for the Group Remuneration Committee, including our approach to the 2022 pay review for executive Directors and the wider workforce. For further details of the Group Remuneration Committee report, see page 276.

Board activities in 2022

Main topic	Sub-topic	Meetings at which topics were discussed[1]									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Sep	Nov	Dec
Strategy	Group strategy	○	○	●	○	●	●	●	●	○	●
	Regional strategy/global business strategy	●	●	●	●	●	○	●	●	●	●
	Environmental, social, governance	●	●	○	●	●	○	●	●	○	●
Business and financial performance	Region/global business	●	●	○	●	●	○	●	●	○	●
	Financial performance	●	●	○	●	●	○	●	●	○	●
Financial	Results and accounts	●	●	○	○	○	○	●	○	○	○
	Dividends	●	●	○	○	○	○	●	○	○	○
	Group financial resource planning	●	●	○	●	●	○	●	●	○	●
Risk	Risk function	●	●	○	●	●	○	●	●	○	●
	Risk appetite	○	○	●	○	○	○	●	○	○	●
	Capital and liquidity adequacy	○	○	●	●	○	○	○	●	○	○
Regulatory	Regulatory and legal matters[2]	●	●	●	●	●	●	●	●	○	●
	Regulatory matters with regulators in attendance[3]	○	○	○	○	○	●	○	○	○	○
External	External insights	○	○	○	●	○	○	○	●	○	○
Technology	Strategic and operational	●	●	○	●	●	●	●	●	○	●
People and culture	Purpose, values and engagement	○	●	○	○	○	○	○	●	○	○
Governance	Subsidiary governance framework	○	●	○	○	○	○	○	○	○	○
	Policies and terms of reference	●	○	○	●	●	○	●	●	○	●
	Board/committee effectiveness	●	●	○	○	○	○	●	○	○	○
	Appointment and succession	○	●	○	○	○	○	●	●	○	●
	AGM and resolutions	●	●	○	●	○	○	○	○	○	○

● *Matter considered* ○ *Matter not considered*

1 *No Board meetings were held during August and October 2022.*
2 *Includes resolvability assessment framework, modern slavery and human trafficking, statement of business principles and code of conduct, regional updates and listing renewals.*
3 *Meeting attended by members of the Prudential Regulation Authority.*

Board and committee effectiveness, performance and accountability

The Board and its committees are committed to regular, independent evaluation of their effectiveness at least once every three years. The Board intends to conduct an independent evaluation in 2023.

For 2022, the Nomination & Corporate Governance Committee agreed that the evaluation of the Board and its committees would again be conducted internally. The process included the completion of a questionnaire, issued by Lintstock, an independent service provider with no other connection to the Group or any individual Director. The questions were designed by the Group Company Secretary and Chief Governance Officer, some based on themes from the 2021 evaluation findings. A summary of the effectiveness reviews of the Board and the Board committees can be found on page 258 and in the respective committee reports from page 259.

To gather qualitative feedback, the Group Company Secretary and Chief Governance Officer, together with the Deputy Group Secretary, conducted interviews with each questionnaire respondent, including all the Board Directors, regular attendees of the relevant meetings and key advisers. The Group Chairman and committee chairs also participated in additional discussions following the consolidation of feedback in respect of the individual committees.

Overall, the work of the Board was rated highly and it was viewed as operating effectively. In general, there were consistent findings across the Board and committee reviews. These included:

- a positive view of the effectiveness of the Chairs of the Board and committees and the participation of its members;
- a greater desire to be even more forward looking;
- a need for continued focus on the quality of meeting materials to ensure that content remains focused, clear and precise; and
- continued collaboration between the Board committees.

At its January 2023 meeting, the Group Chairman led a discussion with the Board and considered the findings. The following areas of focus were discussed and actions agreed: a revised approach to tracking strategy execution; continued development of the timeline of sustainability and technology deliverables; simplification and prioritisation of deliverables and interdependencies; and enhanced focus on customer stakeholder engagement.

Actions will be monitored and addressed on an ongoing basis. Similar discussions were led by each of the committee chairs in their respective January meetings. Progress against these actions will be included in the *Annual Report and Accounts 2023*.

During 2022, a review of the Group Chairman's performance was led by the Senior Independent Director in consultation with the other independent non-executive Directors, management and key stakeholders. Non-executive Directors also undergo regular individual reviews with the Group Chairman. These reviews confirmed that the performance of the Group Chairman and each Director was effective and that each had met their time commitments during the year.

The review of executive Directors' performance, which helps determine their pay outcomes each year, is contained in the Directors' remuneration report on page 276.

Board and Committee evaluation process

The Board made good progress against all of the action points identified during the 2021 evaluation. In particular, the Board:

- enhanced its composition with the appointment of Geraldine Buckingham, which brought significant Asia leadership experience;
- maintained a focus on succession planning, with a view to strengthening its expertise in banking and improving its representation from Asia;
- strengthened workforce engagement, with the appointment of José Antonio Meade Kuribreña as designated non-executive Director for workforce engagement;
- devoted time to the consideration of key areas of focus, including digital opportunities and threats, ESG and strategic risk;
- continued to monitor compliance with the subsidiary accountability framework; and
- enhanced coordination and collaboration between its committees, with combined meetings of the Group Audit Committee, Group Risk Committee and Technology Governance Working Group held during the year.

Summary of 2022 Board effectiveness findings and recommendations for action:

	Findings from the evaluation	Recommendations for action
Strategy, execution and deliverables	• The Board's strategic oversight was rated positively overall, although the consistency of management's articulation, tracking and execution of progress against the Group's strategy could be strengthened. It was recommended to increase the use of metrics to show comparable progress against key deliverables. • The Board's approach to the oversight of the Group's sustainability strategy was rated positively, although the monitoring of sustainability-related key targets required greater clarity. • The Board's oversight of technology strategy was considered strong and it was suggested that the Board required a more detailed plan of digital deliverables to enable continuous monitoring and performance tracking.	• The Group Chief Executive should develop a revised set of metrics related to performance, execution and risk management, as well as other key value drivers, as appropriate. • The Group Chief Executive and relevant accountable executives should develop a timeline of ESG and technology deliverables and milestones.
Simplification and prioritisation	• The importance of devoting sufficient time to challenging management's progress on simplification and prioritisation was highlighted. It was suggested that the Board provide greater oversight of management prioritisation of key projects and strategic deliverables.	• A Board session should be held annually on organisational simplification and prioritisation of deliverables and interdependencies.
Stakeholder engagement	• Engagement with stakeholders was strong, including the focus on the employees, in the year. The Board asked that further enhancements be considered, in particular customers given the current macroeconomic headwinds.	• The Board's stakeholder engagement plan should be reviewed to ensure that all members of the Board have sufficient opportunity to engage with, and understand the views, of the Group's key stakeholders.
Meeting materials	• It was recognised that meeting materials had improved considerably over recent years, but it was emphasised there was opportunity for further improvement around consistency, comparability and ownership. Stakeholder considerations could be better incorporated in Board papers to support decision making.	• Training and/or guidance should be provided to all paper authors in 2023.

Nomination & Corporate Governance Committee

"Developing our skills and experience, and diversity and inclusion ambitions remains a priority and the Committee will continue to oversee and enhance the succession pipeline at Board and senior leadership level."

Dear Shareholder

I am pleased to present the Nomination & Corporate Governance Committee report, which provides an overview of the work of the Committee and its activities during the year.

During 2022, the Committee continued to review the Board's composition, succession planning, skills, experience and diversity, to ensure that the Group operated in line with its ambition of world class governance.

On behalf of the Board, the Committee oversaw a number of changes to Board composition, including the retirements of Pauline van der Meer Mohr and Irene Lee, and the appointment of Geraldine Buckingham. The Committee also closely monitored executive succession planning, in particular the transition of the Group Chief Financial Officer, with Georges Elhedery succeeding Ewen Stevenson from 1 January 2023. Ewen leaves with our sincere thanks for the significant contribution that he has made to the Board and to the broader Group over the past four years.

Jackson Tai will retire from the Board at the conclusion of our 2023 AGM in May and will be succeeded as Chair of the Group Risk Committee by James Forese. On behalf of the Board, I wish to thank Jackson for his outstanding dedication and the significant contribution he has made to the success of the Group, in particular the improvement in our oversight and governance of risk and conduct. James' significant banking and risk experience will be invaluable in the leadership of the Group Risk Committee as the Group continues to deliver on its transformation and growth strategy, in a safe and sustainable manner.

On 1 March 2023, Kalpana Morparia will join the Board, strengthening both its collective Asia business and banking knowledge and experience, and diversity.

Developing our skills and experience, and diversity and inclusion ambitions of the Board and senior management, remains a priority and the Committee will continue to oversee and enhance the succession pipeline at Board and senior leadership level through 2023. This will build on the revised gender and ethnic representation targets introduced within the diversity and inclusion policy, and the work led by management on developing successors for senior leadership roles and under the Asia Talent programme. Our Board diversity and inclusion policy, which contains our revised targets, can be found on hsbc.com.

During 2022, we also took the decision to establish a new Board role designated with responsibility for ensuring that the employee voice is strengthened within the Board's deliberations. The creation of the role was a natural evolution of the work already undertaken to enhance stakeholder engagement within Board decision making. In this role, José Meade will lead our workforce engagement on behalf of the Board, supported by the Corporate Governance and Secretariat and Human Resource functions. Further details on the role and initial areas of focus can be found on page 253.

Membership

	Member since	Meeting attendance in 2022
Mark Tucker (Chair)	**Oct 2017**	**7/7**
Geraldine Buckingham[1]	**May 2022**	**4/4**
Rachel Duan[2]	**Sep 2021**	**6/7**
Dame Carolyn Fairbairn	**Sep 2021**	**7/7**
James Forese	**May 2020**	**7/7**
Steven Guggenheimer	**May 2020**	**7/7**
Irene Lee[3]	**Apr 2018**	**3/3**
José Antonio Meade Kuribreña	**Apr 2019**	**7/7**
Eileen Murray[2]	**Jul 2020**	**5/7**
David Nish	**Apr 2018**	**7/7**
Jackson Tai	**Apr 2018**	**7/7**
Pauline van der Meer Mohr[3]	**Apr 2016**	**3/3**

1 *Geraldine Buckingham was appointed to the Board and joined the Committee on 1 May 2022.*
2 *Rachel Duan was unable to attend the July committee meeting due to a pre-existing engagement. Eileen Murray was unable to attend the April and September meetings for personal health reasons.*
3 *Irene Lee and Pauline van der Meer Mohr stepped down from the Board and the Committee following the conclusion of the AGM on 29 April 2022.*

The Committee's role in overseeing these changes is outlined on the following pages.

As we look ahead to 2023, the Committee will consider the changes to the UK audit, governance and regulatory regimes, including updates to the UK Corporate Governance Code, and the steps needed to ensure the Group continues to operate in line with best practice.

Mark E Tucker

Chair

Nomination & Corporate Governance Committee

21 February 2023

Key responsibilities

The Committee's key responsibilities include:

- leading the process for identifying and nominating candidates for appointment to the Board and its committees;
- overseeing succession planning and development for the Group Executive Committee and other senior executives; and
- overseeing and monitoring the corporate governance framework of the Group and ensuring that this is consistent with best practice.

Committee governance

The Group Chief Executive, the Group Chief Human Resources Officer, and the Group Head of Talent routinely and selectively attended Committee meetings. The Group Company Secretary and Chief Governance Officer attends all Committee meetings and supports the Group Chairman in ensuring that the Committee has fulfilled its governance responsibilities.

Russell Reynolds Associates, which supported the Committee and the management team in relation to Board and senior management succession planning, regularly and selectively attended meetings during the year. It has no other connection with the Group or members of the Board.

Board composition and succession

The Committee continued its focus on ensuring that the Board and its members, both collectively and individually, possess the skills, knowledge and experience necessary to oversee, challenge and support management in the achievement of the Group's strategic and business objectives.

In addition to the retirements of Irene Lee and Pauline van der Meer Mohr, the Board welcomed Geraldine Buckingham, who most recently held the position of Head of Asia-Pacific at BlackRock. She was appointed to the Board with effect from 1 May 2022.

In October, the Group announced the appointment of Georges Elhedery as an executive Director and Group Chief Financial Officer with effect from 1 January 2023. This decision followed a review by the Committee of the composition of the Group Executive Committee with a particular focus on long-term succession planning. It was concluded, based on the recommendation of the Group Chief Executive, that Georges, who was previously co-Chief Executive Officer of Global Banking and Markets, should replace Ewen, who stepped down from the Board at the end of 2022. Georges, who has a track record of driving growth and managing change and who brings a strong focus on execution, will help the Group to accelerate delivery of improved financial performance and shareholder returns.

In advance of taking up the role, Georges spent significant time with Ewen to ensure an orderly handover of responsibilities. The Board has put in place a tailored development and support plan for Georges as he transitions to his new role, which will be overseen by the Committee.

The Committee expects that non-executive Directors serve two three-year terms, with any appointments beyond this to be determined on an annual basis with reference to the needs of the Board and the performance and contribution of the individual. In view of the importance of continuity for key roles on the Board, particularly given the current economic and geopolitical environment, the Committee agreed that David Nish's appointment should be extended for a further year to the 2024 AGM, subject to his re-election by shareholders. In taking this decision, the Committee considered the need for an effective transition in relation to the Senior Independent Director and Chair of the Group Audit Committee roles, both of which David currently holds. It is the Board's strong belief that this extension of David's appointment, given his performance and contribution to the Board during 2022, is in the best interests of the Group and all of its stakeholders.

As referenced in our 2021 report, the Committee agreed to prioritise in future appointments significant previous executive experience in banking, as well as with deep business and cultural expertise across Hong Kong and mainland China, and south-east Asia. A number of potential candidates meeting the desired skills and experiences were identified, a shortlist of which were considered and discussed by the Committee. Following meetings between various members of the Committee and priority candidates to understand their respective interests and capacities, the Board accepted the Committee's recommendations and approved the appointments of Geraldine Buckingham with effect from 1 May 2022 and Kalpana Morparia with effect from 1 March 2023.

Strengthening the Board's collective experience in these areas remains a priority, and the Committee will continue to discuss broader succession planning for key roles on the Board and committees through 2023, and beyond. In addition, succession planning will have regard to diversity and inclusion targets and expectations. The Committee is focused on identifying candidates with the following skills and experience for future appointments to the Board:

- significant executive experience in banking;
- deep business and cultural expertise across Asia, in particular Hong Kong and mainland China, and the Middle East, given the geographical mix of the Group's business and the importance of these regions to the strategy and future growth; and
- previous public company leadership experience.

The Committee will continue to monitor the market for potential candidates for appointment to the Board in both the short and medium term, to ensure that the Board has a pipeline of credible successors and continues to be equipped to effectively discharge its responsibilities.

Board diversity

The Board recognises the importance of gender, social and ethnic diversity, and the strengths diversity brings to Board effectiveness. Diversity is taken into account in its broadest sense when considering succession plans and appointments at both Board and senior management level, as well as more broadly across the Group.

Over the past 12 months, there has been significant focus on diversity at Board level, including as a result of the updated guidance and targets issued by the FTSE Women Leaders Review (formerly the Hampton-Alexander review) and the UK Listing Authority. The Board is supportive of the proposals and, in line with the Board diversity and inclusion policy, remains committed to increasing diversity at Board and senior levels to ensure we reflect the markets and societies we serve. This policy, which was updated in 2022 to incorporate new targets on female representation, details our approach to achieving our diversity ambitions, and ensures that diversity and inclusion factors are considered in succession planning. The revised Board diversity and inclusion policy is available at www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities.

At the end of 2022, the Board had 33% female representation, with four female Board members out of 12. Following our recent announcement in relation to Kalpana Morparia and Jackson Tai, this leaves us on track to meet our aspirational target of at least 40% female representation on the Board by the end of 2023, ahead of the end of 2025 expectations set by the FTSE Women Leaders Review for gender representation on Boards.

The FTSE Women Leaders Review also published revised gender representation targets, specifically the expectation that a woman holds at least one of the senior Board positions of Chair, Chief Executive Officer, Senior Independent Director or Chief Financial Officer by the end of 2025. The Committee considers succession for these key Board roles on an ongoing basis and will take into account the need for greater diversity when considering candidates for appointment to these roles in future. At the end of 2022, all those holding these senior Board positions at the Group were male. The Board is committed to achieving this target by the review's end of 2025 deadline.

The Board continued to exceed the Parker Review target of having at least one Director of diverse ethnic heritage, with three members of our Board self-identifying in line with the ethnicity/ethnic definition set by the Parker Review. Given the global and international nature of our business, including our strong presence and heritage in Asia, the Committee considers that the Board should comprise a greater proportion of diverse ethnic heritage Directors than anticipated by the Parker Review. The Board's targets were revised to reflect this commitment and therefore to maintain or improve the current representation of directors from a diverse ethnic heritage.

Further details on activities to improve diversity across senior management and the wider workforce, together with representation statistics, can be found on page 308.

Diversity of our principal subsidiary boards has also improved as a result of the Committee's focus on succession planning and regular refreshment of subsidiary boards, with gender representation improving across all seven of our principal subsidiaries. The HSBC Bank Director Programme, delivered in partnership with IMD Business School during the first half of 2022, has also helped to prepare senior talent for roles on our subsidiary boards. A number of the graduates who participated in the programme have been provided with opportunities on subsidiary boards, enhancing the skills, experience and diversity of our subsidiary boards. This programme will operate regularly with the next cohort scheduled to take place in 2024.

Independence

Independence is a critical component of good corporate governance, and is a principle that is applied consistently at both Holdings and subsidiary level. The Committee has delegated authority from the Board in relation to the assessment of the independence of non-executive Directors. In accordance with the UK and Hong Kong Corporate Governance Codes, the Committee has reviewed and confirmed that all non-executive Directors who have submitted themselves for election and re-election at the AGM are considered to be independent. This conclusion was reached after consideration of all relevant circumstances that are likely to impair, or could appear to impair, independence.

In line with the requirements of the Hong Kong Corporate Governance Code, the Committee also reviewed and considered the mechanisms in place to ensure independent views and input are available to the Board. These mechanisms include:

- having the appropriate Board and Committee structure in place, including rules on the appointment and tenure of non-executive Directors;
- facilitating the option of having brokers and external industry experts in attendance at Board meetings during 2022, as well as having representatives from the Group's key regulators attend Board meetings in relation to specific regulatory items;
- ensuring non-executive Directors are entitled to obtain independent professional advice relating to their personal responsibilities as a Director at the Group's expense;
- having terms of reference for each Committee and the Board provide authority to engage independent professional advisers; and
- holding annual Board and Committee effectiveness reviews, with feedback sought from members on the quality of, and access to, independent external advice.

Senior executive succession and development

The outputs from the annual capability review, including updated succession plans for the Group Executive Committee members, were considered and approved by the Committee in December 2022. These reflected continued efforts to support the development and progression of diverse talent and promote the long-term success of the Group, with the gender diversity and proportion of Asian heritage successors improving year on year. This included future internal and external succession options for the Group Chief Executive, to ensure that the Committee has a robust and actionable succession plan when required.

The Committee also continued to receive updates on the development of our talent programme within the Asia-Pacific region.

Since its launch in 2020, significant progress has been made towards ensuring that we have a deeper and more diverse leadership bench-strength. Succession plans are more robust, with greater diversity and good succession fulfilment outcomes.

Committee evaluation

The annual review of the effectiveness of the Committee was internally facilitated in 2022. The review concluded that, overall, the Committee continued to operate effectively and in line with regulatory requirements. However, a number of areas for enhancement were identified, including the need for a continued focus on succession planning for the Group Chief Executive, the Committee Chair, the Senior Independent Director and future non-executive Directors, ensuring plans supporting the Board's objectives in relation to diversity and stakeholder needs. Other areas of focus included the continued identification of both internal and external talent, training requirements and the retention strategy for high performing individuals. Certain priority areas of focus for the Committee across 2023 were suggested, including the continued monitoring of progress of governance within material and principal subsidiaries (as defined in the subsidiary accountability framework), and the need to review the external advisers supporting the Committee. The outcomes of the evaluation have been reported to the Board, and the Committee will track the progress in implementing recommendations during 2023. In line with the UK Corporate Governance Code, the 2023 Board and Committee performance review will be externally facilitated.

The Committee has initiated the process for the selection of the independent board evaluator, with a decision on the evaluator to be taken within the first half of the year to allow the review to commence in the second half of 2023. A report on the process, findings and recommendations will be disclosed in the *Annual Report and Accounts 2023*.

The Committee was kept updated on progress on actions agreed following its 2021 evaluation, which were all completed.

Subsidiary governance

In line with the subsidiary accountability framework introduced in 2021, the Committee continued to oversee the corporate governance and succession arrangements across the principal and material subsidiary portfolio. Where appropriate and subject to strong rationale, the Committee approved exceptions from strict compliance with the framework, including to reflect local law and regulation, as well as market practice. The Committee has reinforced its expectations that subsidiaries take steps to achieve full compliance with the framework, with any exception requests subject to thorough review and consideration by the Group Company Secretary and Chief Governance Officer in advance of consideration by the Committee.

Matters considered during 2022

	Jan	Feb	Apr	May	Jul	Sep	Dec
Board composition and succession							
Board composition, including succession planning and skills matrices	●	●	●	●	○	●	○
Approval of diversity and inclusion policy	○	○	○	○	●	○	○
Executive talent and development							
Senior executive succession	○	●	●	●	●	●	●
Approval of executive succession plans	○	○	○	○	○	○	●
Talent programmes	○	●	○	○	○	○	●
Governance							
Board and committee evaluation	●	○	○	○	●	○	○
Subsidiary governance	●	○	○	○	●	●	●
Subsidiary and executive appointments	●	○	●	○	●	●	●

● *Matter considered* ○ *Matter not considered*

Group Audit Committee

"The Committee reviewed management's arrangements for compliance and assurance over regulatory reporting processes, and progress of HSBC-specific reviews of regulatory reporting."

Dear Shareholder

I am pleased to introduce the Group Audit Committee ('GAC') report setting out the key matters and issues considered in 2022.

We welcomed Eileen Murray, who rejoined the GAC in 2022, and Rachel Duan, who was appointed to the Committee in April 2022. Pauline van der Meer Mohr stepped down from the Board and James Forese stepped down from the GAC to assume new Board responsibilities. I would like to thank them both for their support and insightful contributions to the work of the GAC.

The GAC continued to provide oversight of change and transformation programmes to enhance the Group's internal controls over financial reporting. We challenged management on its forecasts and confidence in the delivery of externally communicated targets in an uncertain external environment. The Committee also reviewed management's arrangements for compliance and assurance over regulatory reporting processes, and progress of HSBC-specific reviews of regulatory reporting.

We continued to strengthen our relationships and understanding of issues at the local level through regular information sharing with the principal subsidiary audit committee chairs. This was supplemented with regular meetings with the principal subsidiary audit committee chairs to discuss key issues, and through their attendance at GAC meetings. I also joined a number of principal subsidiary audit committee meetings throughout the Group.

The Group's whistleblowing arrangements continue to satisfy regulatory obligations and I regularly met the whistleblowing team to discuss material whistleblowing cases. Efforts were made in 2022 to drive continuous operational improvements and to provide deeper insights to support our purpose, values and conduct approach. Actions were also taken to make use of best practices across investigative functions and to enhance the experiences of colleagues when they report concerns at HSBC.

The Committee oversaw the retendering for statutory audit services for the 2025 year-end. This process included detailed qualification activities, thorough evaluation of firms, consideration of evolving UK legislation and guidelines, and engagement with regulators. The GAC recommended to the Board that PwC be reappointed for a further term of 10 years commencing 1 January 2025.

The Committee implemented all the actions from the 2022 evaluation and the 2023 review determined that the GAC continued to operate effectively.

David Nish

Chair

Group Audit Committee

21 February 2023

Membership

	Member since	Meeting attendance in 2022[1]
David Nish (Chair)	**May 2016**	**13/13**
Rachel Duan[2]	**Apr 2022**	**6/8**
James Forese[3]	**May 2020**	**5/5**
Eileen Murray[4]	**Jun 2022**	**6/8**
Jackson Tai	**Dec 2018**	**13/13**
Pauline van der Meer Mohr[5]	**Apr 2020**	**5/5**

1 *These included four joint meetings with the Group Risk Committee ('GRC') and the Technology Governance Working Group.*
2 *Rachel Duan was unable to join two meetings due to prior commitments made before becoming a GAC member.*
3 *James Forese stepped down from the GAC on 1 June 2022.*
4 *Eileen Murray rejoined the GAC on 1 June 2022, and was unable to attend two meetings due to personal circumstances.*
5 *Pauline van der Meer Mohr retired from the Board on 29 April 2022.*

Key responsibilities

The Committee's key responsibilities include:

- monitoring and assessing the integrity of the financial statements, formal announcements and regulatory information in relation to the Group's financial performance, as well as significant accounting judgements;
- reviewing the effectiveness of, and ensuring that management has appropriate internal controls over, financial reporting;
- reviewing management's arrangements for compliance with prudential regulatory financial reporting;
- reviewing and monitoring the relationship with the external auditor and overseeing its appointment, tenure, rotation, remuneration, independence and engagement for non-audit services;
- overseeing the Group's policies, procedures and arrangements for capturing and responding to whistleblower concerns and ensuring they are operating effectively; and
- overseeing the work of Global Internal Audit and monitoring and assessing the effectiveness, performance, resourcing, independence and standing of the function.

Committee governance

The Committee keeps the Board informed and advises on matters concerning the Group's financial reporting requirements to ensure that the Board has exercised oversight of the work carried out by management, Global Internal Audit and the external auditor.

Committee meetings usually take place a couple of days before Board meetings to allow the Committee to report its findings and recommendations in a timely and orderly manner. The Board also receives copies of the Committee agendas and minutes of meetings.

The Group Chief Executive, Group Chief Financial Officer, Group Head of Finance, Global Financial Controller, Group Head of Internal Audit, Group Chief Risk and Compliance Officer, Group Company Secretary and Chief Governance Officer and other members of senior management routinely attended meetings of the GAC. The external auditor attended all meetings.

The Chair held regular meetings with management, Global Internal Audit and the external auditor to discuss agenda planning and specific issues as they arose during the year outside the formal Committee process. The Committee also regularly met separately with the internal and external auditors and other senior management to discuss matters in private.

The Committee Secretary regularly met with the Chair to ensure the Committee fulfilled its governance responsibilities, and to consider input from stakeholders when finalising meeting agendas, tracking progress on actions and Committee priorities.

Matters considered during 2022

	Jan	Feb	Apr	Jun	Jul	Sep	Oct	Dec
Reporting								
Financial reporting matters including: – review of financial statements, ensuring that disclosures are fair, balanced and understandable – significant accounting judgements – going concern assumptions and viability statement – supplementary regulatory information	●	●	●	●	●	●	●	●
ESG and climate reporting	●	●	○	○	●	○	●	●
Regulatory reporting-related matters	●	●	●	●	●	●	●	●
Certificates from principal subsidiary audit committees	○	●	○	○	●	○	○	○
Control environment								
Control enhancement programmes	●	●	●	●	●	●	●	●
Group transformation	○	○	○	○	●	○	○	●
Review of deficiencies and effectiveness of internal financial controls	●	●	●	●	●	●	●	●
Internal audit								
Reports from Global Internal Audit	●	●	●	○	●	○	●	●
Audit plan updates, independence and effectiveness	●	○	●	○	●	○	○	●
External audit								
Reports from external audit, including external audit plan	●	●	●	●	●	●	●	●
Appointment, remuneration, non-audit services and effectiveness	●	●	●	●	●	●	○	●
Audit tender	●	○	●	●	●	●	○	●
Compliance								
Accounting standards and critical accounting policies	○	●	○	●	●	○	●	●
Corporate governance codes and listing rules	○	●	○	●	●	○	○	○
Whistleblowing								
Whistleblowing arrangements and effectiveness	○	●	○	○	○	●	○	●

● *Matter considered* ○ *Matter not considered*

Compliance with regulatory requirements

The Board has confirmed that each member of the Committee is independent according to the criteria from the US Securities and Exchange Commission, and the Committee continues to have competence relevant to the sector in which the Group operates. The Board has determined that David Nish, Jackson Tai and Eileen Murray are 'financial experts' for the purposes of section 407 of the Sarbanes-Oxley Act and have recent and relevant financial experience for the purposes of the UK and Hong Kong Corporate Governance Codes.

The GAC Chair continued to engage with regulators, including the UK's PRA and the Financial Reporting Council. These included trilateral meetings involving the Group's external auditor, PwC.

The Committee assessed the adequacy of resources of the accounting, internal audit, financial reporting and ESG performance and reporting functions. It also monitored the legal and regulatory environment relevant to its responsibilities.

How the Committee discharged its responsibilities

Connectivity with principal subsidiary audit committees

The GAC strengthened its working relationship with the principal subsidiary audit committees through formal and informal channels. The GAC Chair regularly met the chairs of the principal subsidiary audit committees to enable close links and deeper understanding on judgements around key issues. The GAC Chair attended a number of the principal subsidiary audit committee meetings and certain chairs of the principal subsidiary audit committees also joined meetings of the GAC during the year.

This continuous engagement supported effective information sharing and targeted collaboration between audit committee chairs and management to ensure there was appropriate focus on the local implementation of programmes. Subsidiary audit committee chairs were also able to directly share local challenges, including regulatory expectations with Group management and the GAC Chair.

On a half-year basis, principal subsidiary audit committees provided certifications to the GAC that regarded the preparation of their financial statements, adherence to Group policies and escalation of any issues that required the attention of the GAC. These certifications also included information regarding the governance, review and assurance activities undertaken by principal subsidiary audit committees in relation to prudential regulatory reporting.

Internal controls

The Committee devoted significant time in understanding the effect on financial reporting risk from high-impact programmes aimed at enhancing and enabling the transformation of the control environment to support financial, prudential regulatory and other regulatory reporting. The GAC provided detailed feedback and challenge to management on a number of aspects, including requesting external assurance, replanning and mobilisation of programme workstreams, resourcing and engagement throughout the Group and with regulators. Common themes from these discussions included the need to improve understanding and accountability for data capture, improve data quality from the implementation and embedding of data policies while ensuring there was a stronger appreciation throughout the Group of the downstream impact on financial and regulatory reporting. The oversight and implementation of these programmes and their component parts will remain a key focus for the Committee in 2023.

The GAC received regular updates and confirmations that management had taken, or was taking, the necessary actions to remediate any failings or weaknesses identified through the operation of the Group's framework of internal financial controls. These updates included the Group's work on compliance with section 404 of the Sarbanes-Oxley Act. Based on this work, the GAC recommended that the Board support its assessment of the internal controls over financial reporting.

For further details on how the Board reviewed the effectiveness of key aspects of internal control, see page 306.

Financial reporting

The Committee is responsible for reviewing the Group's financial reporting during the year, including the *Annual Report and Accounts*, *Interim Report*, quarterly earnings releases, analyst presentations and, where material, Pillar 3 disclosures and other items arising from the review of the Group Disclosure and Controls Committee. As part of its review, the GAC:

- evaluated management's application of critical accounting policies and material areas in which significant accounting judgements were applied;

- gave particular regard to the analysis and measurement of IFRS 9 expected credit losses ('ECL'), including the key judgements and management adjustments made in relation to the forward economic guidance, underlying economic scenarios and reasonableness of the weightings;
- focused on compliance with disclosure requirements to ensure these were consistent, appropriate and acceptable under the relevant financial and governance reporting requirements;
- provided advice to the Board on the form and basis underlying the long-term viability statement; and
- gave careful consideration to the key performance metrics related to strategic priorities and ensured that the performance and outlook statements were fair, balanced and reflected the risks and uncertainties appropriately.

In conjunction with the Group Risk Committee ('GRC'), the GAC considered the current position of the Group, along with the emerging and principal risks, and carried out a robust assessment of the Group's prospects, before making a recommendation to the Board on the Group's long-term viability. The GAC also undertook a detailed review before recommending to the Board that the Group continues to adopt the going concern basis in preparing the annual and interim financial statements. Further details can be found on page 42.

Fair, balanced and understandable

Following review and challenge of the disclosures, the Committee recommended to the Board that the financial statements, taken as a whole, were fair, balanced and understandable. The financial statements provided the shareholders with the necessary information to assess the Group's position and performance, business model, strategy and risks facing the business, including in relation to the increasingly important ESG considerations.

The Committee reviewed the draft *Annual Report and Accounts 2022* and results announcements to enable input and comment. It was supported by the work of the Group Disclosure and Controls Committee, which also reviewed and assessed the *Annual Report and Accounts 2022* and investor communications.

This work enabled the GAC to provide positive assurance to the Board to assist them in making the statement required in compliance with the UK and Hong Kong Corporate Governance Codes.

Key financial metrics and strategic priorities

The Committee assessed management's assurance and preparation over external financial reporting disclosures, in particular the monitoring and tracking of key financial metrics and strategic priorities. In the second quarter of 2022, the Committee was involved at all stages in overseeing and challenging management on the revised financial targets.

The GAC challenged management on the forecasting, analysis and additional assurance work undertaken to support the revised financial targets in light of geopolitical risks, deteriorating outlook, ongoing impact of the Covid-19 pandemic in certain jurisdictions and a rising interest rate environment.

Further details can be found in the 'Principal activities and significant issues considered during 2022' table on page 266.

ESG and climate reporting

The GAC, supported by the executive-level ESG Committee and Group Disclosure and Controls Committee, provided close oversight of the disclosure risks in relation to ESG and climate reporting, amid rising stakeholder expectations.

The GAC tracked and monitored developments from a number of prominent consultations and considered them when reviewing the strategy and scope of ESG and climate disclosures in 2022. In particular, the Committee asked management to provide further details on the pipeline of mandatory regulatory and externally committed ESG and climate-related disclosures over the next 12 to 24 months, including the delivery status. This allowed the Committee to consider management's development of methodologies, tools and data solutions holistically to fulfil external disclosure requirements and commitments.

ESG reporting is fast evolving with few globally consistent reporting standards and a high reliance on external data. The Committee focused on internal and external assurance in this area in line with wider market developments. Management updated the Committee on the verification and assurance framework to ensure that ESG and climate disclosures were materially accurate, consistent, fair and balanced. The GAC discussed the roles and work of the three lines of defence as part of this framework, discussed the nature and root cause of issues identified through the increased assurance work, as well as proposals for further limited third-party assurance to be performed over specific ESG-related metrics.

Regulatory reporting

The Committee continued to focus heavily on the quality and reliability of regulatory reporting and oversight of key programmes to strengthen the end-to-end processes to meet regulatory expectations.

Management provided updates on the status of ongoing HSBC-specific external reviews, and discussed the issues and themes identified from the increased assurance work and focus on regulatory reporting. They also discussed root cause themes, remediation of known issues and new issues identified through the increased assurance work and focus on regulatory reporting. The GAC was instrumental in the initiation of a global programme designed to deliver consistent control frameworks for our regulatory reporting globally over the next few years. The Committee challenged management on remediation plans, to ensure there was a sustainable reduction in issues and that dependencies with other key programmes were well understood. The Committee Chair invited certain principal subsidiary audit committee chairs to GAC meetings to participate in discussions to ensure alignment and understanding of key issues and ongoing regulatory engagement.

UK audit reform

In May 2022, the UK government published its response to the consultation paper, 'Restoring Trust in Audit and Corporate Governance', on strengthening the UK's audit, corporate reporting and corporate governance systems. This summarised the responses received to the consultation and set out the next steps towards implementation.

One of the key changes proposed is for large public interest entities, such as HSBC, to develop and publish an audit and assurance policy every three years, setting out the approach to assurance of information beyond the financial statements. The government will also introduce a new statutory resilience statement.

The Committee received updates on the outcome of the consultation and reviewed management's proposed actions to support the future requirement for disclosure of an audit and assurance policy. This includes the work towards designing an integrated internal assurance approach across the three lines of defence, with the development during the year of an integrated assurance framework in support of the Group's risk management framework.

While the legislation and expected guidance around the form and content of an audit and assurance policy is still being drafted, it is expected that the areas below will be covered by any future disclosures. Current disclosures exist in respect of certain of these areas, although these will need to be enhanced and expanded as guidance develops. The areas highlighted below are in addition to disclosures on the statutory audit and assurance work required by regulators.

Area	Relevant current disclosure
Overview of risk and internal control framework	Risk review, pages 131 to 238
Assurance over internal controls	Risk review, pages 131 to 238, 'Global Internal Audit', page 266, and 'Internal controls' page 306.
Specific information subject to assurance	Environmental, social and governance review, page 14
Resilience statement (currently viability statement)	Long-term viability and going concern statement, page 42
External auditor engagement	'External auditor', page 265
Stakeholder engagement on audit and assurance policy	No existing disclosure.

The Committee continues to focus on ESG and regulatory reporting as areas for expanded assurance, in line with the risk assessment framework established in 2021. The specific external assurance over ESG disclosures is set out in the ESG review section of the *Annual Report and Accounts*. The Committee continued to respond to various regulatory engagement requests and surveys, including the Financial Reporting Council's Draft Minimum Standards for Audit Committees. The Committee will continue to monitor developments as legislation is drafted to enact the requirements and the associated guidance is developed.

External auditor

The GAC has the primary responsibility for overseeing the relationship with the Group's external auditor, PwC.

PwC completed its eighth audit, providing robust challenge to management and sound independent advice to the Committee on specific financial reporting judgements and the control environment. The senior audit partner is Scott Berryman who has been in the role since 2019. The Committee reviewed the external auditor's approach and strategy for the annual audit and also received regular updates on the audit, including observations on the control environment. Critical audit matters discussed with PwC are set out in its report on page 313.

External audit plan

The GAC reviewed the PwC external audit approach, including the materiality, risk assessment and scope of the audit. PwC highlighted the changes being made to their approach to enhance the quality and effectiveness of the audit. Changes for the 2023 audit included more auditing being performed centrally across legal entities. The Committee also focused on PwC's increased use of technology solutions, and received detailed briefings on its approach to data and analytics.

Effectiveness of external audit process

The GAC assessed the effectiveness of PwC as the Group's external auditor, using a questionnaire that focused on the overall audit process, its effectiveness and the quality of output.

In addition, the GAC Chair, certain principal subsidiary audit chairs and members of the Group Executive Committee met with the Head of Audit, PwC UK to discuss findings from the questionnaire and provide in-depth feedback on the interaction with the PwC audit team.

PwC highlighted the actions being taken in response to the HSBC effectiveness review, including the development of audit quality indicators, which would provide a balanced scorecard and transparent reporting to the GAC. These audit quality indicators focused on the following areas:

- findings from inspections across the Group and regulators on PwC as a firm;
- the hours of audit work delivered by senior PwC audit team members, the extent of specialist and expert involvement, delivery against agreed timetable and milestones and the use of technology;
- any new control deficiencies in Sarbanes-Oxley locations, proportion of management identified deficiencies and delivery of audit deliverables to agreed timelines; and
- outcomes and scores from annual audit surveys, independent senior partner reviews and prior period errors.

The GAC will continue to receive regular updates from PwC and management on the progress of the external audit plan and PwC performance across the audit quality indicators.

There were no breaches of the policy on hiring employees or former employees of the external auditor during the year. The external auditor attended all Committee meetings and the GAC Chair maintains regular contact with the senior audit partner and his team throughout the year.

Independence and objectivity

The Committee assessed any potential threats to independence that were self-identified or reported by PwC. The GAC considered PwC to be independent and PwC, in accordance with professional ethical standards and applicable rules and regulations, provided the GAC with written confirmation of its independence for the duration of 2022.

The Committee confirms it has complied with the provisions of The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 for the financial statements. The Committee acknowledges the provisions contained in the 2018 UK Corporate Governance Code in respect of audit tendering. In conformance with these requirements, the GAC oversaw the retendering of statutory audit services for the 2025 year-end, including considering the tendering and shared audit proposals from the UK government's consultation. More details on the audit tender can be found on page 267.

The Committee has recommended to the Board that PwC should be reappointed as auditor. Resolutions concerning the reappointment of PwC and its audit fee for 2023 will be proposed to shareholders at the 2023 AGM.

Non-audit services

The Committee is responsible for setting, reviewing and monitoring the appropriateness of the provision of non-audit services by the external auditor. It also applies the Group's policy on the award of non-audit services to the external auditor. The non-audit services are carried out in accordance with the external auditor independence policy to ensure that services do not create a conflict of interest. All non-audit services are either approved by the GAC, or by Group Finance when acting within delegated limits and criteria set by the GAC.

The non-audit services carried out by PwC included 73 engagements approved during the year where the fees were over $100,000 but less than $1m. Global Finance, as a delegate of the GAC, considered that it was in the best interests of the Group to use PwC for these services because they were:

- audit-related engagements that were largely carried out by members of the audit engagement team, with the work closely related to the work performed in the audit;
- engagements covered under other assurance services that require obtaining appropriate audit evidence to express a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the subject matter information; or
- other permitted services to advisory attestation reports on internal controls of a service organisation primarily prepared for and used by third-party end users.

Eleven engagements during the year were approved where the fees exceeded $1m. These were mainly engagements required by the regulator and incremental fees related to previously approved engagements, including the provision of services by PwC relating to the Section 166 Financial Services and Markets Act 2000 Skilled Person report.

Auditors' remuneration	**2022 $m**	2021 $m
Total fees payable	**148.1**	129.4
Of which fees for non-audit services	**50.5**	41.3

Global Internal Audit

The primary role of the Global Internal Audit function is to help the Board and management protect the assets, reputation and sustainability of the Group. Global Internal Audit does this by providing independent and objective assurance on the design and operating effectiveness of the Group's governance, risk management and control framework and processes, prioritising the greatest areas of risk. The independence of Global Internal Audit from day-to-day line management responsibility is critical to its ability to deliver objective audit coverage by maintaining an independent and objective stance. Global Internal Audit is free from interference by any element in the organisation, including on matters of audit selection, scope, procedures, frequency, timing, or internal audit report content. The Group Head of Internal Audit reports to, and meets frequently with, the Chair of the GAC. In addition, in 2022, there was more interaction between Global Internal Audit senior management and the members of the GAC, aimed at increasing knowledge and awareness of the audit universe and existing and emerging risks identified by Global Internal Audit. Global Internal Audit adheres to The Institute of Internal Auditors' mandatory guidance.

Consistent with previous years, the 2023 audit planning process includes assessing the inherent risks and strength of the control environment across the audit entities representing the Group. Results of this assessment are combined with a top-down analysis of risk themes by risk category to ensure that themes identified are addressed in the annual plan. Audit coverage is achieved using a combination of business and functional audits of processes and controls, risk management frameworks and major change initiatives, as well as regulatory audits, investigations and special reviews. In addition to the ongoing importance of regulatory-focused work, key risk theme categories for 2023 audit coverage remain as: strategy, governance and culture; financial crime, conduct and compliance; financial resilience; and operational resilience. A quarterly assessment of key risk themes will form the basis of thematic reporting and plan updates and will ultimately drive the 2024 planning process.

In 2023, Global Internal Audit will maintain significant focus on the Group transformation portfolio, increase coverage of treasury risks, financial forecasting processes and regulatory reporting, and include coverage of ESG risk, with focus on climate commitments, operationalisation and reporting. In addition, Global Internal Audit will continue its programme of culture audits to assess the extent that behaviours reflect HSBC's purpose, ambition, values and strategy, and expand its coverage of franchise audits for locally significant countries, following the development of the approach in 2022. The annual audit plan and material plan updates made in response to changes in the Group's structure and risk profile are approved by the GAC.

The results of audit work, together with an assessment of the Group's overall governance, risk management and control framework and processes are reported regularly to the GAC, GRC and local audit and risk committees, as appropriate. This reporting highlights key themes identified through audit activity, and the output from continuous monitoring. This includes business and regulatory developments and an independent view of emerging and horizon risk, together with details of audit coverage and any required changes to the annual audit plan. Based on regular internal audit reporting to the GAC, private sessions with the Group Head of Internal Audit, the Global Professional Practices annual assessment and quarterly quality assurance updates, the GAC is satisfied with the effectiveness of the Global Internal Audit function and the appropriateness of its resources.

Executive management is responsible for ensuring that issues raised by Global Internal Audit are addressed within an appropriate and agreed timetable. Confirmation to this effect must be provided to Global Internal Audit, which validates closure on a risk basis.

Global Internal Audit maintains a close working relationship with HSBC's external auditor, PwC. The external auditor is kept informed of Global Internal Audit's activities and results, and is afforded free access to all internal audit reports and supporting records.

Principal activities and significant issues considered during 2022

Collaborative oversight by GAC, GRC and Technology Governance Working Group

The GAC and GRC worked closely to ensure there were procedures to manage risk and oversee the internal control framework. The Chairs are members of both committees and engage on the agendas of each other's committees to further enhance connectivity, coordination and flow of information.

A further development, based on 2022 evaluation findings, was to have joint meetings of the GAC, GRC and Technology Governance Working Group. These meetings would ensure there was coordinated oversight and consistent joint feedback to management on areas of significant overlap.

Areas of joint focus for the GAC, GRC and the Technology Governance Working Group during 2022 were:

Finance on the Cloud

Finance on the Cloud is a key multi-year data and reporting transformation programme using Cloud technology to enable the transformation of the Global Finance operating model and re-engineering of core reporting processes.

The committees conducted a deep dive review of Finance on the Cloud and held multiple meetings throughout 2022 to challenge management on the programme's overall objectives, scope and target end-state. As part of these discussions, the committees considered organisational realignment and programme leadership, and asked management to seek external assurance and validation of the Finance on the Cloud investment case and technology architecture. The committees also ensured that there was a greater understanding of the complexities and dependencies between Finance on the Cloud and other key programmes to ensure that deadlines for financial and regulatory reporting deliverables were met.

Digital Business Services

The committees held a joint meeting to develop a deeper understanding of the risk and internal controls issues across key components of Digital Business Services. The joint meeting discussed:

- the regulatory purpose of the service company structure, and management providing an update on initiatives to streamline, simplify and automate the services;
- actions taken by the Identity and Access Management sub-function to tackle access risks through automation and a new toolset;
- monitoring and governance activities carried out by the Global Operations and Payments teams, and its shift towards an automated control environment; and
- actions carried out within Global Procurement to enhance the risk management and control culture, in particular with regard to the oversight of critical third parties and its upgrade to a Cloud-based procurement platform.

Embedding data into our culture

The committees reviewed and challenged the Group's data strategy and the work required for the Group to embed its data policies, define the data technology landscape, and build a data-led culture. The committees also reviewed the Group's approach to harnessing and using data to better unlock value for our customers.

Whistleblowing and speak-up culture

An important part of HSBC's values is speaking up when something does not feel right. HSBC remains committed to ensuring colleagues have confidence to speak up and acting when they do. A wide variety of channels are provided for colleagues to raise concerns, including the Group's whistleblowing channel, HSBC Confidential (see page 92 for further information). The GAC is responsible for the oversight of the effectiveness of the Group's whistleblowing arrangements. The

Group Head of Compliance provides periodic reporting to the GAC on the efficacy of the whistleblowing arrangements, providing an assessment of controls and detailing the results of internal audit assessments. The Committee is also briefed on culture and conduct risks arising from whistleblowing cases and the associated management actions. The Chair of the GAC acts as the Group's whistleblowers' champion, with responsibility for ensuring and overseeing the integrity, independence and effectiveness of HSBC's policies and procedures on whistleblowing and the protection of whistleblowers.

The Chair continued to meet regularly throughout 2022 with the Group Head of Conduct, Policy and Whistleblowing, receiving briefings on material whistleblowing cases and the ongoing effectiveness of the whistleblowing arrangements. The Committee also received reports on actions being taken to further align our whistleblowing arrangements to actively support our purpose and values, and conduct approach. During 2023, the Committee will continue to be briefed on these actions, as well as the ongoing effectiveness of the HSBC Confidential channel.

Audit tender

Following the conclusion of a formal competitive audit tender process, the Board has approved the re-appointment of PwC as external auditor of the statutory audits of HSBC Holdings for 2025 to 2034, at which point we are required to rotate auditors in accordance with UK requirements. The audit tender process considered both large and challenger audit firms and was led by the GAC.

Scope

As a UK public interest entity, we are required to tender our audit every 10 years and rotate our auditor every 20 years. We disclosed in our *Annual Report and Accounts 2021* the intention to commence an audit tender, given PwC were initially appointed for the audit of the *Annual Report and Accounts 2015*.

Pursuant to the tender, interested and qualified parties were invited to submit proposals for the right to provide statutory audit services to HSBC Holdings and its subsidiaries for a period of 10 years commencing from the financial year ending 31 December 2025.

HSBC's primary objective was to ensure a fair and transparent tender process and appoint the audit firm that will provide the highest quality in the most effective and efficient manner. Firms were assessed against detailed criteria which considered audit quality, capacity and capability, understanding of HSBC and future audit vision. Input was sought from principal subsidiaries' audit committee chairs as part of the GAC evaluation. Management views were advisory only to the GAC.

In accordance with best practice corporate governance requirements, the audit tender process described below was designed and led by the GAC, with direct involvement of the GAC Chair at every stage.

Pre-qualification

HSBC undertook a series of pre-qualification activities to identify vendors that satisfy our minimum requirements relating to credibility, capacity and independence. These activities were overseen by the GAC. The pre-qualification phase considered both large and challenger audit firms and explored the possibility of adopting a managed, shared audit using challenger firms.

During the pre-qualification phase, we were informed by two of the large audit firms that they were not able to participate in the tender as they believed they had insufficient capacity to perform a quality audit.

Three shortlisted audit firms were invited to respond to the formal tender, including PwC and one challenger audit firm.

Process and assessment

The shortlisted firms were invited to submit capability proposals (including written and data modelling exercises) to demonstrate their understanding of HSBC, audit quality, capabilities and their future vision of audit. Group and principal subsidiaries' audit committee chair and management meetings took place during October 2022, enabling both the audit firms and HSBC management to articulate and discuss critical success factors for the audit. Lead audit partner referrals and audit quality reports from regulators supplemented these assessments and contributed to the final evaluation of the audit firms. The capability proposals were submitted on a fee blind basis, with the fee proposal submitted directly to the GAC Chair.

The Committee considered the following during the evaluation of audit firms:

- a tender proposal, a formal document in response to the tender requirements;
- management meetings between the firms and HSBC (major legal entity audit committee chairs and senior management);
- data exercises covering audit planning and risk assessment, ECL modelling, firms' broader assurance offering and a shared audit exercise;
- public regulator audit reports for independent assessment on audit quality;
- external referees to provide a third-party opinion on the audit lead partner to support the evaluation process; and
- final presentations to the GAC.

As part of the tender process, the GAC Chair also met with Chief Executive and Head of Standards of the Financial Reporting Council to explain our audit tender process, understand views on shared audits and seek input into our evaluation of individual firm's audit quality track record.

Evaluation

The key evaluation criteria and their respective weightings used to assess the successful audit firm were proposed by management and reviewed by the Group Audit Committee. The criteria were assessed through formal capability proposals, presentations and certain supplementary evidence:

- Audit quality (30%) – regulatory evaluation, methodology, risk assessment, technology.
- Capacity and capability (30%) – footprint, partner quality and rotation, diversity, independence.
- Future audit vision (20%) – future audit developments, audit reform and innovation.
- Understanding of HSBC (20%) – knowledge of HSBC, shareholder concerns and the financial services landscape.

Final decision

The GAC considered various data points from the assessments outlined above, adopting a scorecard approach to supplement the final presentations made by the audit firms at the end of the tender process. The Committee considered the merits of appointing a challenger audit firm in a managed shared audit capacity, in line with recent UK government proposals. However, it did not have sufficient confidence that the desired audit quality outcomes could be assured in a such a large, complex, integrated and global organisation to pursue such an arrangement.

The GAC presented two audit firms to the Board for consideration of awarding the tender, recommending the re-appointment of PwC given their strong performance against our evaluation criteria and the benefits of continuity in this period of strategic change and uncertainty in the external environment.

The Board made a final decision to award the audit tender to PwC on 19 January 2023. PwC will continue to be subject to annual performance reviews (including annual effectiveness surveys and analysis of relevant audit regulator findings) in the period up to 2025 to support the annual AGM auditor re-appointment requirement.

Principal activities and significant issues considered during 2022

Areas of focus	Key issues	Conclusions and actions
Financial and regulatory reporting	**Key financial metrics and strategic priorities** The GAC considered the key judgements in relation to external reporting to track the key financial metrics and strategic priorities and to review the forecast performance and outlook.	In exercising its oversight, the Committee assessed management's assurance and preparation of external financial reporting disclosures. The Committee reviewed the draft external reporting disclosures and provided feedback and challenge on the top sensitive disclosures, including key financial metrics and strategic priorities to ensure HSBC was consistent and transparent in its messaging.
	Environmental, social and governance ('ESG') reporting The Committee considered management's efforts to enhance ESG disclosures and associated verification and assurance activities. The GAC reviewed the 2022 ESG disclosure approach in line with our external commitments.	In relation to our climate change resolution, particular attention was given to the disclosure of the financed and facilitated emissions, and thermal coal exposures. The Committee considered the key limitations and challenges relating to governance, processes, controls and data underpinning climate reporting. The Committee also discussed the nature and root cause of issues identified through the increased assurance work and ongoing enhancements to the governance, processes, controls and data underpinning climate reporting, which resulted in the deferral of disclosures on facilitated emissions and thermal coal. The Committee reviewed the ESG reporting strategy, including the broadening of ESG coverage in the *Annual Report and Accounts* and management's approach on integrated reporting, which will be further informed by feedback from external stakeholders.
	Regulatory reporting assurance programme The GAC monitored the progress of the regulatory reporting assurance programme to enhance the Group's regulatory reporting, impact on the control environment and oversee regulatory reviews and engagement.	The Committee reflected on the continued focus on the quality and reliability of regulatory reporting by the PRA and other regulators globally. The GAC reviewed management's efforts to strengthen and simplify the end-to-end operating model, including commissioning further independent external reviews of various aspects of regulatory reporting. The Committee discussed and provided feedback on management's engagement plans with the Group's regulators, including any potential impacts on some of our regulatory ratios. We continue to keep the PRA and other relevant regulators informed of our progress.
Significant accounting judgements	**Expected credit losses** The measurement of expected credit losses involves significant judgements, particularly under current economic conditions. Despite a general recovery in economic conditions in 2022, there remains an elevated degree of uncertainty over ECL estimation under current conditions, due to macroeconomic and political uncertainties.	The measurement of expected credit losses involves significant judgements, particularly under current economic conditions. There remains an elevated degree of uncertainty over ECL estimation under current conditions, due to macroeconomic, and political uncertainties. The GAC reviewed the economic scenarios for the key countries in which the Group operates, and challenged management's judgements as to the weightings assigned to these scenarios. The GAC also challenged management's approach to making management adjustments to account for the uncertainty in outcomes arising from the Russia-Ukraine war, inflation, supply chain disruption risks, China commercial real estate and Covid-19, including the rationale for such adjustments, the controls underpinning the adjustment processes, and under what conditions such adjustments could be reduced or removed. The GAC also challenged management on the overall levels of ECL across portfolios, including looking at historical performances of portfolios and peer group comparisons.
	Goodwill, other non-financial assets and investment in subsidiaries impairment During the year, management tested for impairment goodwill, other non-financial assets and investments in subsidiaries. Key judgements in this area relate to long-term growth rates, discount factors and what cash flows to include for each cash-generating unit tested, both in terms of compliance with the accounting standards and reasonableness of the forecast.	The GAC received reports on management's approach to goodwill, other non-financial assets and investments in subsidiaries impairment testing and challenged the approach and methodologies used, with a key focus on the cash flows included within the forecasts and the discount rates used. The GAC also challenged management's key judgements and considered the reasonableness of the outcomes as a sense check against the business forecasts and strategic objectives of HSBC.
	Associates (Bank of Communications Co., Limited) During the year, management performed the impairment review of HSBC's investment in Bank of Communications Co., Ltd ('BoCom'). The impairment reviews are complex and require significant judgements, such as projected future cash flows, discount rate, and regulatory capital assumptions.	The GAC reviewed the judgements in relation to the impairment review of HSBC's investment in BoCom, including the sensitivity of the results to estimates and key assumptions such as projected future cash flows and regulatory capital assumptions. Additionally, the GAC reviewed the model's sensitivity to long-term assumptions including the continued appropriateness of the discount rates. The GAC also challenged management to review all aspects of its approach to accounting for BoCom to ensure the approach remains the most appropriate in terms of accounting judgements including compliance with the relevant accounting requirements.
	Investments in subsidiaries Management has reviewed investments in subsidiaries for indicators of impairment and conducted impairment reviews where relevant. These involve exercising significant judgement to assess the recoverable amounts of subsidiaries, by reference to projected future cash flows, discount rates and regulatory capital assumptions.	The GAC reviewed the judgements in relation to the impairment review of HSBC Overseas Holdings (UK) Limited, and the key inputs underpinning the recoverable amounts of its subsidiaries.

Principal activities and significant issues considered during 2022 (continued)

Areas of focus	Key issues	Conclusions and actions
Significant accounting judgements	**Legal proceedings and regulatory matters** Management has used judgement in relation to the recognition and measurement of provisions, as well as the existence of contingent liabilities for legal and regulatory matters.	The GAC received reports from management on the legal proceedings and regulatory matters that highlight the accounting judgements for matters where these are required. The matters requiring significant judgements were highlighted. The GAC has reviewed these reports and agrees with the conclusions reached by management.
	Valuation of defined benefit pension obligations The valuation of defined benefit pension obligations involves highly judgemental inputs and assumptions, of which the most sensitive are the discount rate, pension payments and deferred pensions, inflation rate and changes in mortality.	The GAC has considered the effect of changes in key assumptions on the HSBC UK Bank plc section of the HSBC Bank (UK) Pensions Scheme, which is the principal plan of HSBC Group. The GAC also considered the impact of changes in key assumptions on other schemes.
	Valuation of financial instruments Due to the ongoing volatile market conditions in 2022, management continuously refined its approach to valuing the Group's investment portfolio. In addition, as losses were incurred on the novation of certain derivative portfolios, management considered whether fair value adjustments were required under the fair value framework. Management's analysis provided insufficient evidence to support the introduction of these adjustments in line with IFRSs.	The GAC considered the key valuation metrics and judgements involved in the determination of the fair value of financial instruments. The GAC considered the valuation control framework, valuation metrics, significant year-end judgements and emerging valuation topics and agrees with the judgements applied by management.
	Long-term viability and going concern statement The GAC has considered a wide range of information relating to present and future projections of profitability, cash flows, capital requirements and capital resources. These considerations include stressed scenarios that reflect the implications of the Russia-Ukraine war, disrupted supply chains globally and slower Chinese economic activity, as well as considering potential impacts from other top and emerging risks, and the related impact on profitability, capital and liquidity.	In accordance with the UK and Hong Kong Corporate Governance Codes, the Directors carried out a robust assessment of the principal risks of the Group and parent company. The GAC considered the statement to be made by the Directors and concluded that the Group and parent company will be able to continue in operation and meet liabilities as they fall due, and that it is appropriate that the long-term viability statement covers a period of three years.
	Tax-related judgements HSBC has recognised deferred tax assets to the extent that they are recoverable through expected future taxable profits. Significant judgement continues to be exercised in assessing the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and expected outcomes relating to uncertain tax treatments.	The GAC considered the recoverability of deferred tax assets, in particular in the US, France and the UK. The GAC also considered management's judgements relating to tax positions in respect of which the appropriate tax treatment is uncertain, open to interpretation or has been challenged by the tax authority.
	Impact of acquisitions and disposals In 2022, HSBC engaged in a number of business acquisition and disposal activities, notably in Canada, France, Singapore and India. There are a number of accounting impacts that need to be considered, including the timing of recognition of assets held-for-sale, gains or losses, and the measurement of assets and liabilities on acquisition or disposal.	The GAC considered the impacts of the planned exits of the Canadian and French retail businesses, management's judgements in relation to classification as held for sale, and the timing of the accounting recognition of these transactions. The GAC also considered the financial and accounting impacts of other acquisitions and disposals.

Principal activities and significant issues considered during 2022 (continued)

Areas of focus	Key issues	Conclusions and actions
Group transformation	**Transformation and sustainable control environment** The GAC will oversee the impact on the risk and control environment from the Group transformation programme.	The Committee received regular updates on the Group transformation programme and the broader change framework, to review the impact on the risk and control environment, to oversee progress of the transformation programme and the continued embedding of the broader change framework. In these updates the Committee monitored the progress of the programme, focused on the continued implementation of the change framework and the progress in the management of the entire change portfolio. This oversight helped the Committee to understand the progress being made in the management of the change portfolio, through the implementation of the change framework. The committee noted the progress on simplifying our change inventory, greater rigour on tracking progress against committed business cases, and strengthening of the lessons learnt process. Management's updates were supplemented by further focus and assurance work from Global Internal Audit where a dedicated team continuously monitored and reviewed the Group transformation programme. This included carrying out targeted audit reviews, in addition to audits of significant programmes.
	Global Finance transformation The Committee reviewed the proposals for the Global Finance organisational design, the migration to Cloud and the impact on financial controls.	The Committee has oversight for the adequacy of resources and expertise, as well as succession planning for the Global Finance function. During 2022, the Committee dedicated significant time to the review and progress of the multi-year Global Finance transformation programme, particularly Finance on the Cloud, with the overall objectives being to improve the control environment and customer outcomes and to make use of technology to increase overall efficiency. The Group Chief Financial Officer had private sessions with the Committee to share his perspectives on the progress of the Global Finance transformation and where additional focus was required.
Regulatory change	**IFRS 17 'Insurance Contracts'** The Committee will oversee the transition to IFRS 17 and consider the wider strategic implications of the change on the insurance business.	During 2022 management provided updates to the Committee on preparations for the implementation of IFRS 17, which is effective from 1 January 2023 with one year of comparative restatements required. The Committee was updated on the production of the transition balance sheet and considered the financial impacts (for which a summary is provided within the Future Accounting Developments section of the Basis of Preparation on page 335), as well as the generation of comparative income statement estimated impacts (for which a high level summary based on estimated 1H22 results is provided on page 99). The Committee also received updates with respect to progress on implementing the supporting operational infrastructure, internal controls over financial reporting, key judgements considered including transition approaches selected, as well as plans for disclosure of related non-GAAP measures and key performance metrics. The first publication of results on an IFRS 17 basis will be at the 1Q23 Earnings Release, and the Committee noted that management intends to publish an IFRS 17 Transition statement together with that announcement.
	Basel III Reform The GAC considered the implementation of the Basel III Reform and the impact on the capital requirements and RWA assurance. This was considered in the context of the strategy and structure of the balance sheet.	The Committee received an update on the progress and impact of the Basel III programme on the Group. Management discussed the uncertainty over the final definition of the rules and the actions taken to ensure sufficient flexibility to make changes and mitigate risks from legislation being finalised at a later date and also on a staggered basis across each jurisdiction. The discussion highlighted the dependencies of the Basel III programme with other Group transformation programmes, in particular the dependency on adoption of the Finance on the Cloud solution, risk model development and the impact on data delivery and storage. The Committee noted the completion of the programme restructure, reviewed the ongoing management of risks, issues and dependencies and challenged management to prioritise deliverables across each jurisdiction in line with regulatory timelines, in each case, to ensure that solutions delivered to the minimum required standards. The Committee noted the overall improved status of the programme and requested an update post the Office of the Superintendent of Financial Institutions Canada implementation date of 1 April 2023.

Committee evaluation and effectiveness

The annual review of the effectiveness of the Board committees, including the GAC, was conducted internally in 2022, led by the Group Company Secretary and Chief Governance Officer. Overall, the review concluded that the GAC continued to operate effectively. The Chair's management of meetings and leadership of the audit tender process, in particular, were rated highly. The review also made certain recommendations for continuous improvement. These included a need for continued focus on the quality of reporting, oversight of prioritisation of key programmes, and continued coordination between the GAC and other Board committees on topics of mutual interest. It was also suggested that the Committee should dedicate more time to the oversight of capacity and succession planning in the Finance and Internal Audit functions. The Committee considered the outcomes of the evaluation and accepts the findings. The evaluation outcomes were reported to the Board, and the Committee will track progress against the recommendations during 2023.

Focus of future activities

In 2023, the Committee will prioritise control remediation and enhancements, particularly of controls supporting regulatory reporting. This will include developing a deeper understanding of the prioritisation and interdependencies in the delivery of key transformation and regulatory programmes to strengthen the risk and control environment. It will also monitor domestic and worldwide tax policy developments and examine the potential impact on accounting judgements. A key priority will be to further embed ESG and climate-related disclosures to meet increasing expectations of stakeholders, in particular the implementation of robust processes and controls to support these disclosures. Along with other committees of the Board, the Committee will continue to ensure root cause themes related to understanding and accountability for data capture, data quality and the implementation and embedding of data policies are addressed by management.

Group Risk Committee

"The GRC closely monitored heightened geopolitical and macroeconomic headwinds throughout the year to anticipate potential impacts to the Group's revenue, capital base and continuing ability to support customers."

Dear Shareholder

I am pleased to present the Group Risk Committee ('GRC') report.

Geopolitical risks and the macroeconomic outlook deteriorated rapidly at the start of the year due to the Russia-Ukraine war. The GRC closely monitored heightened geopolitical and macroeconomic headwinds throughout the year to anticipate potential impacts to the Group's revenue, capital base and continuing ability to support its customers. Measures included monitoring the Group's preparedness for an expected recession in key markets from rising inflation and interest rates. The Committee embraced management's development of forward-looking sensitivity analysis to assess the potential impacts on HSBC's prudential position, franchise resilience and ability to support customers.

The GRC worked closely with the Group Chief Risk and Compliance Officer to strengthen the Group's risk management framework, and to promote the development of more dynamic and granular risk appetite statements to manage HSBC's risk profile.

Throughout the year, the GRC reviewed and challenged management on the Group's regulatory submissions, including the Bank of England's requirements for the Resolvability Assessment Framework, internal capital adequacy assessment process ('ICAAP') and internal liquidity adequacy assessment process ('ILAAP'). The GRC had primary non-executive responsibility for reviewing the outcomes of regulatory stress tests, including the Bank of England's climate biennial exploratory scenario, and the 2022 annual cyclical scenario exercise.

The GRC carefully considered the Group's regulatory remediation and change programmes, and helped direct management to better prioritise and understand where there are interdependencies. In particular, the GRC reviewed and challenged the Group's data management plans and interest rate risk in the banking book strategy. The GRC also provided oversight and support to risk transformation activities to develop stronger risk management capabilities and outcomes across the Group.

The GRC continued to review its committee composition, skills and experience. In June, we welcomed Geraldine Buckingham and James Forese as new members, and we expressed sincere gratitude to José Antonio Meade Kuribreña and Eileen Murray, who stepped down to assume new Board governance responsibilities.

Jackson Tai

Chair

Group Risk Committee

21 February 2023

Membership

	Member since	Meeting attendance in 2022[1]
Jackson Tai (Chair)	**Sep 2016**	**18/18**
Geraldine Buckingham[2]	**June 2022**	**11/11**
Dame Carolyn Fairbairn[3]	**Sep 2021**	**17/18**
James Forese[4]	**June 2022**	**12/13**
Steven Guggenheimer[5]	**May 2020**	**16/18**
José Antonio Meade Kuribreña[6]	**May 2019**	**10/10**
Eileen Murray[7]	**Jul 2020**	**7/9**
David Nish[8]	**Feb 2020**	**16/18**

1 *These included seven scheduled meetings, five ad hoc meetings, four joint meetings with the Group Audit Committee and the Technology Governance Working Group, and two joint meetings with the Group Remuneration Committee.*
2 *Geraldine Buckingham joined the GRC on 1 June 2022.*
3 *Dame Carolyn Fairbairn was unable to attend one meeting due to a prior commitment.*
4 *James Forese joined the GRC on 1 June 2022. He was unable to attend one meeting due to a prior commitment.*
5 *Steven Guggenheimer was unable to attend two meetings due to personal circumstances.*
6 *José Antonio Meade Kuribreña stepped down from the GRC on 1 June 2022.*
7 *Eileen Murray stepped down from the GRC on 1 June 2022. She was unable to attend two meetings due to personal circumstances.*
8 *David Nish was unable to attend two meetings due to a prior commitment.*

Key responsibilities

The GRC has overall non-executive responsibility for the oversight of risk-related matters and the risks impacting the Group. The GRC's key responsibilities include:

- overseeing and advising the Board on all risk-related matters, including financial and non-financial risks;
- advising the Board on risk appetite-related matters, and key regulatory submissions;
- reviewing the effectiveness of the Group's risk management framework and internal controls systems (other than internal financial controls overseen by the GAC);
- reviewing and challenging the Group's stress testing exercises; and
- overseeing the Group's approach to conduct, fairness and preventing financial crime.

Committee governance

The Group Chief Risk and Compliance Officer, Group Chief Financial Officer, Group Chief Operating Officer, Group Company Secretary and Chief Governance Officer, Group Chief Human Resources Officer, Group Chief Legal Officer, Group Head of Internal Audit, Group Head of Finance and Group Head of Risk Strategy and Macroeconomic Risk are standing attendees at GRC meetings. The Chair and members of the GRC also hold private meetings with the Group Chief Risk and Compliance Officer, the Group Head of Internal Audit and external auditor, PwC, following scheduled GRC meetings.

The participation of our senior business leaders, including the Group Chief Executive who attended six scheduled GRC meetings in 2022, reaffirmed the ownership and accountability of risks in the first line of defence.

The Chair meets regularly with the Group Chief Risk and Compliance Officer to discuss priorities and track progress on key actions. The Chair also has regular meetings with members of senior management to discuss specific risk matters that arise outside formal meetings. The Chair also meets regularly with the GRC Secretary to ensure the GRC addresses its governance responsibilities. A summary of coverage is set out in the 'Matters considered during 2022' table on page 272.

Matters considered during 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Sep	Oct	Dec
Holistic enterprise risk monitoring including Group risk profile[1]	●	●	●	●	●	●	●	●	○	●
Risk framework and/or policies	●	●	○	○	○	○	●	○	○	○
Treasury risk	○	●	●	●	●	●	●	●	●	●
Wholesale/retail credit risk	○	●	○	●	●	○	●	○	●	●
Financial reporting risk	○	●	○	○	○	●	○	○	○	○
Resilience risk (including IT and operational risk)	○	○	●	●	●	●	●	●	○	●
Financial crime risk	○	●	●	●	○	●	●	○	○	○
People and conduct risk	○	●	○	○	●	○	○	●	○	●
Regulatory compliance risk	○	●	○	●	●	○	●	●	●	●
Legal risk	○	●	○	●	○	○	●	●	○	●
Model risk	○	○	○	○	○	○	○	●	○	○
ESG risk	○	○	○	○	○	○	●	●	●	●

● *Matter considered* ○ *Matter not considered*

1 *The GRC receives updates on all risk types through the Group risk profile, which is presented to the majority of meetings. The Committee also met with the Group Chief Risk and Compliance Officer and Risk and Compliance Executive Committee members in November 2022 to review the GRC agenda, particularly matters relating to risk transformation, financial crime and conduct.*

How the Committee discharged its responsibilities

Activities outside formal meetings

The GRC held a number of meetings outside its regular schedule to facilitate deeper and more effective oversight of the risks impacting the Group. In particular, Directors' education meetings and GRC Chair's preview meetings strengthened the understanding of more technical topics and promoted constructive challenge. Areas covered included risk transformation, interest rate risk in the banking book, stress testing, ICAAP and ILAAP preparations, as well as recovery and resolution planning. Further details on these sessions are included in the 'Principal activities and significant issues considered during 2022' table starting on page 273.

Connectivity with principal subsidiary risk committees

During 2022, the GRC continued to actively engage with principal subsidiary risk committees through the scheduled participation of principal subsidiary risk committee chairs at GRC meetings, and through a connectivity meeting with the principal subsidiary risk committee chairs. This participation and connectivity promoted the sharing of information and best practices between the GRC and principal subsidiary risk committees.

The GRC also received reports on the key risks facing principal subsidiaries at its regular meetings and continued to review escalated reports and certifications from the principal subsidiary risk committees. The certifications confirmed that the principal subsidiary risk committees had challenged management on the quality of the information provided, reviewed the actions proposed by management to address any emerging issues and that risk management and internal control systems had been operating effectively.

These interactions furthered the GRC's understanding of the risk profile of the principal subsidiaries, leading to more comprehensive review and challenge by the GRC.

Engagement with the Risk and Compliance Executive Committee

During 2022, the GRC met with the Risk and Compliance Executive Committee to promote information sharing and encourage active engagement with executive management.

During the engagement meeting, the GRC developed a better understanding of the efforts to strengthen our capabilities across the Group Risk and Compliance function. There were also in-depth discussions on the efforts to embed the right risk culture into our global operations to support our transformation activities. The engagement also promoted a healthy working relationship between GRC members and executive management.

Collaborative oversight by the GRC, GAC and Technology Governance Working Group

The GRC worked closely with the GAC and the Technology Governance Working Group to address any areas of significant overlap, and to oversee risk more comprehensively through inter-committee communications and joint meetings.

The GRC, GAC and the Technology Governance Working Group convened on four occasions to consider the Group's data strategy and ambitions, the Finance on the Cloud transformation programme, and internal control issues across key components of Digital Business Services.

Further details on each of these sessions can be found under the 'Collaborative oversight by the GAC, GRC and Technology Governance Working Group' section of the GAC report on page 266.

The committees worked closely to ensure appropriate alignment in the review, discussion, challenge and conclusions on topics including risk and control issues relating to Digital Business Services, and the transition of core capabilities to the Cloud. This ensured that the committees benefited from each other's expertise and challenge. The GRC Chair also included the GAC Chair for pre-meetings on technical matters such as interest rate risk in the banking book and stress testing.

Coordination between the GRC, GAC and the Technology Governance Working Group is supported by cross-membership. The GRC and GAC Chairs are members of both committees in order to strengthen connectivity and the flow of information between the committees. The GRC Chair is also a member of the Technology Governance Working Group, and each of the co-Chairs of the Technology Governance Working Group are members of the GRC and GAC, respectively.

Principal activities and significant issues considered during 2022

Risk areas	Key issues	Conclusions and actions
Holistic enterprise risk monitoring, including Group risk profile	Geopolitical and macroeconomic risks continue to present significant challenges to revenue growth, operational resilience, and our commitment to serve customers and local markets.	The GRC closely monitored global geopolitical and macroeconomic risks that could impact the Group's strategy, business performance or operations. These risks were exacerbated by the Russia-Ukraine conflict and by related regulatory and reputational risks impacting our operations globally. The GRC continued to track top and emerging risks, our risk appetite and other management information metrics, as well as other early warning measures to understand sensitivities and the likelihood of the potential impact to our operations, customers and stakeholders. The GRC encouraged management to examine and maintain a timely and up-to-date book of strategic management actions.
Risk framework/ policies	The Group risk appetite statement defines the Group's risk appetite and tolerance thresholds and forms the basis of the first and second lines of defence's management of risks, the Group's capacity and capabilities to support customers, and the achievement of strategic goals.	The GRC maintained oversight of the Group's risk management framework and changes to the Group's risk appetite statements, which provided the basis for the Committee's interactive review of financial and non-financial risk management information at each scheduled GRC meeting. The GRC continued to promote the development of more dynamic and granular risk appetite statements that were forward looking and risk-responsive. The GRC provided oversight for the linkage between risk appetite statements with the Group's corporate strategy, stress testing, financial resource plan, as well as the Group's move towards stronger, sustainably higher returns for shareholders. The GRC recommended changes to the Group's risk appetite statement, including in the areas of interest rate risk in the banking book, insurance risk, climate risk, resilience risk, financial crime risk, regulatory compliance and liquidity risk.
Treasury risk, including stress testing and recovery and resolution	The Group takes active steps to safeguard its capital and liquidity positions. It also performs internal and regulatory stress tests to measure its resilience and performance against stress, and to consider strategic management actions that could be applied against anticipated stress events and headwinds. The Group is also required to show how its resolution strategy could be carried out in an orderly way, and identify any risks to successful resolution.	The GRC reviewed the Group's ongoing treasury, capital and liquidity risk management activities, including early warning indicators, scenario stress testing, interest rate risk in the banking book ('IRRBB') strategy and remediation activity, capital and liquidity reporting, and capital and liquidity adequacy. The GRC conducted its annual review, challenge and recommendation of the Group's ICAAP and ILAAP to the Board for approval. GRC members previewed the ICAAP and ILAAP submissions in depth, with input from principal subsidiary risk committee chairs as appropriate. The GRC evaluated the Group's IRRBB strategy and progress on the multi-year liquidity improvement programme. The GRC will continue to monitor the Group's IRRBB strategy closely through regular updates in 2023. In relation to stress testing exercises, the GRC reviewed the Bank of England's 2022 annual cyclical scenarios, and following a detailed review of principal subsidiary and global businesses inputs, approved the results of the 2022 annual cyclical scenario exercise in December 2022. The GRC also reviewed the implications of the results of the severely adverse scenario stress test from the Federal Reserve's Comprehensive Capital Analysis and Review in relation to HSBC North America Holdings, and considered actions being progressed by management in response. The GRC continued its oversight of the Group's progress in developing its capabilities against the Bank of England's requirements for recovery and resolvability. In 2022, the GRC reviewed and challenged the Group recovery plan, including with an assessment of the financial resources and recovery capacity needed to stabilise the Group. The GRC considered views of all lines of defence to determine credibility and ability to execute the plan. In advance of the review by the GRC, the GRC and GAC Chairs met with management to consider the principal subsidiary risk committee components. The GRC was heavily involved in the governance of the resolvability assessment framework ('RAF'). This included oversight of the addendum to the Group's RAF self-assessment that set out HSBC's progress since submission of the original self-assessment in October 2021. The GRC also reviewed the RAF public disclosure prior to its submission, and considered remedial actions to address the feedback provided by the Bank of England. In addition, the GRC assessed the adequacy of the recovery and resolution planning programme that is expected to deliver improvements, in line with management expectation and the PRA's feedback.
Wholesale/ retail credit risk	HSBC faces risk from the possibility of losses resulting from the failure of a counterparty to meet its agreed obligations to pay the Group.	The GRC reviewed updates on the strategy and approach to managing credit risk and credit risk capabilities. The GRC received quarterly updates on the Group's expected credit losses and provisions, loan impairment charges and the credit risk arising from the wholesale portfolio and mortgage books. The GRC also reviewed the potential impact of a likely recession in our key markets due to rising inflation and interest rates to assess management's readiness and approach to drive stronger credit risk management practices. The GRC continued its emphasis on building even stronger credit capabilities for specialty sectors, the development of stronger portfolio management capabilities and further improving the Group's credit risk culture.

Principal activities and significant issues considered during 2022 (continued)

Risk areas	Key issues	Conclusions and actions
Financial reporting risk	HSBC is exposed to the risk where controls supporting the reporting of its financial statements are not effective, resulting in material error or misstatement.	The GRC receives regular reports on entity level control assessments to enable the oversight of the effectiveness of such controls in support of the Group's financial reporting. The GRC also receives notable audit reports that provide an assessment of control effectiveness, where applicable. While the GAC assumes primary responsibility for the oversight of financial reporting capabilities, the GAC collaborated with the GRC and the Technology Governance Working Group to assess the progress in developing these capabilities. Further details on the joint meeting are included in the 'Collaborative oversight by the GAC, GRC and Technology Governance Working Group' section on page 272.
Resilience risk (technology and operational risk)	Resilience risk is where we may be unable to provide our customers with critical business services due to significant disruption. Technology risk is where there may be unmanaged disruption to any IT system within HSBC, as a result of malicious acts, accidental actions or poor IT practice or IT system failure. The operational resilience programme defines the Group's policies and practices to strengthen its ability and readiness to serve customers in the event of unforeseen disruptions in key markets.	The GRC continued its oversight of the Group's implementation of operational resilience capabilities in line with PRA and FCA policies. The GRC reviewed and challenged the operational resilience self-assessment against regulatory expectations, and worked with management to ensure that ownership and the delivery of resilience outcomes were embedded within the business and with function leaders. The GRC advocated for the early adoption of operational resilience requirements across key markets and businesses. The GRC will oversee the progress in extending the programme of operational resilience globally throughout 2023. The GRC regularly reviewed reports on the Group's technology risk profile, as well as reports on cybersecurity risks. The GRC also maintained a strong focus on understanding the Group's data risk landscape, its data strategy and data management programme.
Financial crime risk	The Group is committed to closely monitoring and managing the risk that HSBC's products and services will be exploited for criminal activity, including fraud, bribery and corruption, tax evasion, sanctions and export control violations, money laundering, terrorist financing and proliferation financing.	The GRC continued to review the Group's approach to managing its financial crime risk across geographies and businesses. This included reviewing the Group's progress in enhancing its transaction monitoring framework, as well as monitoring the fraud landscape and the strategies for managing such risk. In light of the Russia-Ukraine war, the GRC also maintained oversight of the ever-changing and increasingly complex international sanctions landscape in which the Group and its customers operate, as well as the Group's approach to managing its compliance with multiple and differing sanctions regimes globally.
People and conduct risk	The Group promotes a culture that is effective in managing risk and leads to fair conduct outcomes. It seeks to actively manage the risk of not having the right people with the right skills doing the right thing, including risks associated with employment practices and relations.	The GRC monitored people risk and employee conduct, with support from the Group Chief Human Resources Officer and Group Chief Risk and Compliance Officer. The GRC considered people risk issues with a focus on capacity, capability, culture and conduct. It also considered remuneration risks, and strategies to retain talent and acquire new capabilities and skills in key areas. The GRC also placed strong emphasis on policies and practices relating to conduct and fairness to customers, especially on vulnerable customers given heightened macroeconomic pressures and stress on customers across markets. The GRC and Group Remuneration Committee met jointly in September and December, and reviewed the Group's risk and reward alignment framework to promote sound and effective risk management in meeting PRA and FCA remuneration rules and expectations.
Regulatory compliance risk	The Group operates in multiple jurisdictions, and is exposed to risks associated with inappropriate market conduct or breaching related financial services regulatory standards or expectations.	The GRC receives feedback from regulators, and monitors the progress of any regulatory remediation activities, with the support from the Group Chief Risk and Compliance Officer as well as principal subsidiary risk committee chairs. During the year, the GRC had oversight over reports providing feedback from regulators, including a summary of regulatory deliverables to ensure HSBC remains in line with regulatory standards and expectations.
Legal risk	HSBC is exposed to the risk of financial loss, legal or regulatory action resulting from contractual risk, dispute management risk, breach of competition law or intellectual property risk.	The GRC oversees and receives regular updates on key legal developments and material legal issues from the Group Chief Legal Officer. The updates also cover material litigation and regulatory enforcement matters and an overview of the legal risk profile of HSBC.
Model risk	HSBC faces risk from the inappropriate or incorrect business decisions arising from the use of models that have been inadequately designed, implemented or used, or from models that do not perform in line with expectations and predictions.	The GRC continued to oversee the Group's progress in managing model risk through the Group Chief Risk and Compliance Officer's Group risk profile report. The GRC oversaw the progress in achieving our model risk vision and the strengthening of our model risk management capabilities. In particular, the GRC reviewed model risk deliverables against external review findings, improvements made to enhance first line of defence engagement in the model lifecycle, progress made to transform the Model Risk Management function and the implementation of new global model risk policy and standards.

Principal activities and significant issues considered during 2022 (continued)

Risk areas	Key issues	Conclusions and actions
ESG risk	Successful delivery of our climate ambition will be determined by our ability to measure and manage all components of environmental, social and governance ('ESG') risk, including climate risk.	The GRC remained focused on ESG risk, including climate risk, and has reviewed quarterly reports on climate risk management, while maintaining oversight of delivery plans to ensure that the Group develops robust climate risk management capabilities. The GRC also has oversight over ESG-related initiatives and reviews these to assess the risk profile. The GRC approved the Group's climate biennial exploratory scenario stress test submission to the PRA in March 2022. In preparation, the GRC reviewed the scenario and considered planned engagement with clients, strategic management actions; the challenges in relation to data, modelling and infrastructure support; and the impact of climate change on our physical risks including through our residential and corporate real estate mortgage books.

Committee evaluation

During 2022, the GRC implemented the recommendations of the external committee evaluation conducted by Lintstock in consultation with the Group Company Secretary and Chief Compliance Officer in December 2021. This included strengthening the focus of meeting agendas, and continuing the GRC's engagement with the Risk and Compliance Executive Committee and principal subsidiary risk committee chairs.

Continuing the commitment to regular evaluation, the Group Company Secretary and Chief Governance Officer performed an annual review of the effectiveness of the GRC in December 2022. The evaluation concluded that the GRC continued to operate effectively and in line with regulatory requirements, and identified enhancements. The outcomes of the evaluation have been reported to the Board, and the GRC will track the progress in implementing recommendations during 2023.

Focus of future activities

The GRC's focus for 2023 will include the following activities. It will:

- oversee risk transformation activities to develop even stronger risk management capabilities;
- oversee the continued enhancement of the Group's risk appetite and risk management framework, especially in light of continued geopolitical and macroeconomic headwinds;
- continue to oversee treasury risk to strengthen our capital and liquidity management capabilities, including proactive management of interest rate risk in the banking book;
- continue to review and challenge the consistency of our risk appetite statements, our financial resource plan, and the outcomes from our stress testing exercise;
- monitor our ESG progress, including the delivery against the climate commitments and the development of appropriate data and model management tools and capabilities;
- continue the oversight of recovery and resolution planning activities to assess our resolvability capabilities if such situation arises;
- continue the oversight of the delivery of technology-related programmes including the adoption of Cloud platforms, and enhancement of the Group's IT systems/platform;
- continue to oversee financial crime risk and the strengthening of the financial crime control framework, including proactive management by the business; and
- assess our strategic opportunities and risks including exposures to digital currencies or assets and use of timely application of technology such as machine learning or artificial intelligence.

Directors' remuneration report

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All disclosures in the Directors' remuneration report are unaudited unless otherwise stated. Disclosures marked as audited should be considered audited in the context of financial statements taken as a whole.

"This year we have refreshed our reward strategy to inspire a dynamic culture as we focus on energising for growth and delivering sustainable value to our shareholders, customers and colleagues."

Dear Shareholder

I am pleased to present our 2022 Directors' remuneration report on behalf of the members of the Group Remuneration Committee, and my first as Chair of the Committee. I would like to thank our previous Chair, Pauline van der Meer Mohr, for her excellent stewardship of the Committee.

I also thank you for your support of our remuneration resolutions at the 2022 Annual General Meeting ('AGM'). Our current policy and its implementation received 96% of votes in favour.

In addition to our usual agenda, the Committee has been focused on aligning performance measures and remuneration more closely with our strategy. We have been engaging with our major shareholders and other investor groups, who have shared valuable feedback.

We have refreshed our wider reward strategy and proposition for the workforce in response to the new or elevated challenges we are facing as we move beyond the Covid-19 pandemic, including the cost of living pressures many of our colleagues are experiencing. The commitments we make to colleagues are critical to support us in energising for growth and delivering sustainable performance.

Performance in 2022

Financial performance

Financial performance in 2022 was supported by a rise in global interest rates, which materially improved our net interest income, and we maintained our strong focus on cost discipline, despite inflationary pressures and continued investment in technology. While our revenue outlook remains positive, there are continued risks around inflation and increasing macroeconomic uncertainty in many of the markets in which we operate.

Adjusted profit before tax increased by $3.4bn to $24.0bn, as a rise in adjusted revenue of 18% to $55.3bn was partly offset by an adjusted expected credit losses charge of $3.6bn, compared with a net release in 2021 of $0.8bn, and growth in adjusted operating expenses of 1%. Our return on average tangible equity ('RoTE') was 9.9%, an increase of 1.6% on 2021, and we have now exceeded our ambition of $120bn of risk-weighted asset ('RWA') gross saves since the start of our programme in 2020.

Membership

	Member since	Meeting attendance in 2022
Dame Carolyn Fairbairn (Chair)	**Sept 2021**	**6/6**
Geraldine Buckingham	**May 2022**	**4/4**
Rachel Duan	**Sept 2021**	**6/6**
James Forese	**May 2020**	**6/6**
José Antonio Meade Kuribreña	**May 2021**	**6/6**
Pauline van der Meer Mohr[1]	**Jan 2016**	**2/2**

1 *Pauline van der Meer Mohr stepped down from the Committee and Board at the conclusion of the AGM on 29 April 2022.*

In 2022, we approved dividends of $0.32 per share, equivalent to a payout ratio of 44% of reported earnings per share. We are establishing a dividend payout ratio of 50% of reported earnings per share for 2023 and 2024, excluding material significant items, and we intend to revert to paying quarterly dividends from the first quarter of 2023.

Non-financial performance

In our employee Snapshot survey, our Employee engagement and Inclusion indices both increased by 1% year on year to 73% and 76%, respectively, which are both above the financial services benchmarks. The percentage of Black heritage colleagues in senior leadership globally increased by 0.3% to 2.5%, meeting our stretch goal. The percentage of women in senior leadership also increased by 1.6% to 33.3% since 2021, and we are on track to meet our commitment of 35% by 2025.

For customer satisfaction, net promoter score ('NPS') performance has been positive relative to our competitors in some areas of our business, with work to do in others. In WPB, our NPS increased in the UK and Hong Kong, and we were ranked in first place in Hong Kong. In CMB, our NPS increased in Hong Kong but declined in the UK, and we were ranked in second place in Hong Kong. In GBM, our global NPS improved and our global rank remained in fifth place. In WPB and CMB digital businesses in Hong Kong, we were ranked in first and third places, respectively. In GBM globally, our digital trade finance platforms maintained first place for the quality of platforms. Our PayMe payments app was also ranked in second place for digital wallets. In WPB, our NPS increased in mainland China and Singapore, remained unchanged in Mexico, and in India saw a small decline. In CMB, our NPS increased in mainland China, Singapore and Mexico, and our rank positions in those markets either improved compared with 2021 or were in the top three against competitors.

Workforce reward

Group variable pay pool

The Committee determined an overall variable pay pool of $3,359m (2021: $3,495m) following a review of our performance against financial and non-financial metrics set out in the Group risk framework. The Committee considered our strong 2022 financial performance, with a 17% increase in adjusted profit before tax, a RoTE of 9.9% and adjusted cost growth of 1% year on year. The Committee also considered the external environment, the challenging economic outlook and projected outcomes across the market to ensure we remain competitive to attract and retain talent.

The distribution of the pool was differentiated by business performance. Overall year-on-year variable pay outcomes were strongest in CMB, followed by WPB but down in GBM to reflect relative performance. There was robust differentiation for individual performance so that our highest performers received meaningful variable pay increases on the previous year. We have protected variable pay for junior colleagues, which was up on average, recognising the inflationary and cost of living challenges experienced across most of our markets.

In determining 2023 fixed pay increases, we considered the impact of inflation in each country where we operate. Increases were targeted towards more junior and middle management colleagues as fixed pay is a larger proportion of their overall pay. Across the Group, there was

an overall increase of 5.5% in fixed pay, compared with 3.6% for 2022. The level of increases varied by country, depending on the economic situation and individual roles. There were no fixed pay increases for most of our senior leaders, including our executive Directors.

Supporting colleagues in 2022

We monitored the global economic situation carefully and took action to support our colleagues according to the market, given local inflation and cost of living pressures. We continued to support our colleagues in those markets still significantly impacted by the pandemic. In mainland China and Hong Kong, we provided care packages and increased well-being sessions. In mainland China, we also delivered food essentials and provided inconvenience allowances. In Argentina and Türkiye, we made regular adjustments to fixed pay given the continuing inflationary pressures. In Sri Lanka, we made one-off payments and fixed pay increases during the year to address high inflation. In the UK, we provided almost 17,000 junior colleagues with a one-off payment of £1,500 to help with energy cost pressures.

We continued to focus on well-being, benefits, financial guidance, employee assistance programmes and access to hardship funds, as well as pay.

Key remuneration decisions for Directors

Executive Director changes

Georges Elhedery was appointed Group Chief Financial Officer from 1 January 2023. Ewen Stevenson is leaving the Group on 30 April 2023 and will receive a payment in lieu of notice until 25 October 2023. All remuneration decisions in respect of this change were made in accordance with our shareholder-approved policy, and are detailed in the annual report on remuneration.

Georges Elhedery's remuneration was set on appointment with a base salary of £780,000 per annum, a fixed pay allowance of £1,085,000 per annum, a pension allowance of 10% of his base salary (in line with most UK employees) and variable remuneration and benefits in accordance with our policy.

In recognition of the services that Ewen Stevenson provided to HSBC during his tenure and the circumstances of his departure, he has been treated as a good leaver for the purpose of unvested incentive awards. He remained eligible for a 2022 annual incentive but will not receive a long-term incentive award for the 2023 to 2025 performance period.

Executive Directors' annual incentive

The Group's financial performance was reflected in the performance against the measures in the executive Directors' annual scorecards. In particular, the Committee recognised: adjusted profit before tax was $24.0bn, which represented an increase of 17% compared with 2021; strong cost controls were demonstrated, despite inflationary pressures and continued investment in technology, with adjusted costs at $30.5bn; and RoTE was 9.9%, an improvement on the 8.3% achieved in 2021.

Overall, combined with non-financial measures, this level of performance resulted in a formulaic scorecard outcome of 79.32% of the maximum opportunity for Noel Quinn (2021: 57.30%) and 76.65% for Ewen Stevenson (2021: 60.43%). The increase relative to 2021 reflected performance against targets and is largely a result of stronger financial performance in 2022.

The annual incentive scorecard is also subject to a risk and compliance modifier, which provides the Committee with the discretion to adjust down the overall scorecard outcome. Taking into account the Group's performance against risk metrics, inputs from the Group Risk Committee and the overall accountability of the executive Directors with regards to specific matters around capital management in the year, the Committee used its judgement and applied a downward adjustment of 5% and 15% to Noel Quinn's and Ewen Stevenson's annual incentive outcomes, respectively. The difference in adjustments reflected the degree of accountability and relative proximity for capital management. This resulted in an adjusted incentive outcome of 75.35% of maximum opportunity for Noel Quinn and 65.15% for Ewen Stevenson. This represented amounts of £2,164,000 for Noel Quinn (2021: £1,590,000) and £1,091,000 for Ewen Stevenson (2021: £978,000).

The year-on-year increase in annual incentive for the Group Chief Executive is based on a formulaic assessment of performance against financial and non-financial targets set by the Board at the start of last year, taking into account the Group's 2022 financial plan and strategic priorities and commitments.

While the variable pay pool is determined by the Group's overall performance, it is not set in a formulaic manner. Our approach is to smooth the variable pay pool outcomes over time to protect overall pay for colleagues from material volatility in performance caused by market conditions. In years of lower Group performance, we protect colleagues from significant downside in pay outcomes, including in 2020 when adjusted profit before tax fell 45% year on year, but the variable pay pool decreased just 20%. In years of stronger performance, such as in 2022, a similar approach is taken on the upside.

The Committee carefully considered the executive Directors' pay outcomes in the context of pay decisions made for the wider workforce and determined that these are an appropriate reflection of Group, business and individual performance delivered in 2022.

Long-term incentive ('LTI') for executive Directors

For LTI awards for the 2023 to 2025 performance period, we will continue to use measures and targets relating to: RoTE; capital reallocation to Asia; relative total shareholder return ('TSR'); and environmental impact.

Following feedback from some of our shareholders, the Committee reviewed the TSR performance peer group, with the objective of including more Asian peers to better reflect the balance of markets and businesses of the Group. The new peer group will be used for the relative TSR measure for LTI awards with a 2023 to 2025 performance period, and now includes Bank of China (Hong Kong), China Merchants Bank and OCBC Bank. No change will be made to the performance peer group for any LTI awards granted prior to the 2023 to 2025 LTI award.

For the 2023 to 2025 performance period: Noel Quinn will receive an LTI award of £4,275,000 (320% of salary) in respect of his performance for 2022; Georges Elhedery will receive an LTI award of £1,248,000 (160% of salary) in respect of his performance for 2022 when he was not an executive Director; and Ewen Stevenson will not receive an LTI award.

Ewen Stevenson participated in the LTI for the 2020 to 2022 performance period that will vest in March 2023. The TSR and RoTE performance targets were not met and therefore these elements of the award lapsed in full. The customers measure was determined to be 57% met and therefore 19% of the overall award will vest on a pro-rata basis over the next five years.

Executive Directors' fixed pay for 2023

The Committee decided that there will be no increase to the base salary or fixed pay allowances for Noel Quinn for 2023. The fixed pay for Georges Elhedery for 2023 was set on appointment.

Ordinarily, an increase would have been considered for Noel Quinn to ensure that his total remuneration opportunity is competitive in the market. However, given the broader economic context and inflationary and cost of living pressures for colleagues across many of our markets, we targeted increases to our more junior and lower paid colleagues this year.

Looking ahead

We note the UK government's consultation around the variable to fixed pay ratio, and anticipate that this will eventually allow us to place more emphasis on variable pay in the overall package. We will keep our approach under review and consult with shareholders on any potential changes to our overall remuneration framework for executive Directors. In the meantime, our approach for 2023 will be consistent with the current approved policy and regulatory requirements.

We are committed to opening up a world of opportunity for all our people in 2023 and beyond. Our refreshed reward proposition articulates how we are building a dynamic culture where the best

want to work, where we reward colleagues responsibly and reward their successes. We will continue to do the right thing for our colleagues, rewarding them fairly and supporting them to grow.

We continue to protect value for our shareholders and customers, and manage our costs. We will also continue to engage with all our stakeholders on executive pay matters.

We believe that our decisions on executive pay for 2022 have struck the right balance for all stakeholders and are also fair relative to performance. As Chair of the Committee, I hope you will support the 2022 Directors' remuneration report, which will be subject to an advisory vote at our 2023 AGM.

Dame Carolyn Fairbairn

Chair

Group Remuneration Committee

21 February 2023

Remuneration decisions in context

We have given serious consideration to how we manage competing variables when deciding pay outcomes this year. We feel the decisions that have been made strike a balance between prioritising fixed pay increases for those who need it the most, and variable pay increases for our most exceptional performers. We will continue to listen carefully to all stakeholders – colleagues, customers and shareholders, as well as our regulators – in making these important judgements.

What are we doing to support colleagues?

A key aspect of the Committee's activities this year has been ensuring that we support our colleagues through the challenges that many are facing. In recognition of the broader environment, we are spending more on fixed pay than we have in recent years, and we have increased the total funding by 5.5% globally. We want to make sure that colleagues can avoid facing financial hardship, and we support the senior leadership's decision to focus fixed pay increases on our more junior and middle management employees, where this is a larger proportion of their overall pay.

We have taken a number of targeted actions to support our colleagues during 2022, taking the local context into consideration, as detailed in the Chair's letter. This includes support for those particularly impacted by inflationary pressures in Argentina, Türkiye and Sri Lanka. It also includes support in mainland China and Hong Kong where colleagues are still significantly impacted by the pandemic. In the UK, we supported colleagues facing energy cost pressures.

We have continued to provide a wide range of resources to all our colleagues globally, including wider support on financial guidance, employee assistance programmes and access to hardship funds.

How was fixed and variable pay determined for executive Directors?

The Committee makes decisions on executive Director pay based on a policy that is agreed with our shareholders. The performance against targets in the executive Directors' annual scorecards reflects their individual contribution to the Group's strong financial performance in 2022.

We set clear targets at the start of the year, and then the Committee assesses if they have been met or not. The annual incentive scorecard is also subject to a risk and compliance modifier.

Overall, this has resulted in a higher annual incentive outcome for our executive Directors for 2022. Details of these outcomes are set out in our annual report on remuneration below.

There have been no fixed pay increases for our executive Directors.

How was fixed and variable pay funding determined for all employees?

The Group has increased fixed pay funding by 5.5% for 2023, compared with 3.6% for 2022.

We have allocated fixed pay by market, with outcomes differentiated based on the economic circumstances, and particularly wage inflation, in each market. We have taken into account the impact of the current economic environment and targeted fixed pay increases towards more junior and middle management colleagues where fixed pay is a larger part of their total compensation and who may be most impacted by inflation and cost of living pressures.

There have been no fixed pay increases for most of our senior leaders for 2023, including our executive Directors.

The Group variable pay pool is determined by reviewing Group performance against key financial and non-financial metrics. Although we have improved our financial performance this year, we have kept the pool broadly flat when compared with 2021. Our approach is to smooth the variable pay pool outcomes over time to protect overall pay for colleagues from material volatility in performance caused by market conditions. Within the overall variable pay pool, there has been significant differentiation to reward our best performing businesses and recognise excellent individual performance.

Outcomes for colleagues vary significantly depending on their role, business area and performance.

What are the key areas of focus for the Committee over the coming year?

The Committee notes the UK government's consultation around the bonus cap, and we anticipate that this will eventually lead to a remuneration structure with a greater focus on variable pay for performance. We intend to review the remuneration arrangements for our executive Directors in due course in light of the UK government's proposals, and will consult with shareholders on any potential changes to our overall remuneration framework.

The Committee continues to keep the performance metrics used for our executive scorecards under review to ensure that they continue to support the successful execution of our strategy, while also taking into account views of our major shareholders, and investor and regulatory guidance in this area. As the Group continues to progress on our environmental, social and governance ('ESG') journey, the Committee has discussed how we ensure our environmental and social commitments continue to be appropriately reflected in the performance scorecards for members of the Group Executive Committee. This is an area the Committee intends to consider further over the coming year.

Executive remuneration at a glance

This section sets out an overview of our performance, our 2022 remuneration outcomes for executive Directors and a summary of the policy approved by shareholders at our 2022 AGM, including how we will implement the policy in 2023.

Our performance

Adjusted profit before tax
$24.0bn
(2021: $20.6bn)

Net new invested assets
$80bn
(2021: $64bn)

Adjusted costs
$30.5bn
(2021: $30.1bn)

Return on average tangible equity
9.9%
(2021: 8.3%)

Employee engagement index
73%
(2021: 72%)

Inclusion index
76%
(2021: 75%)

Colleagues reporting HSBC cares about their well-being
70%
(up from 50% in 2016 when we first ran the survey)

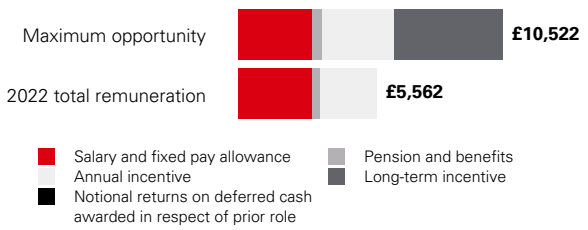
Percentage of women in senior leadership roles
33.3%
(2021: 31.7%)

Remuneration outcomes for executive Directors

Summary remuneration outcomes for 2022 are set out below. Further details are set out in our annual report on remuneration.

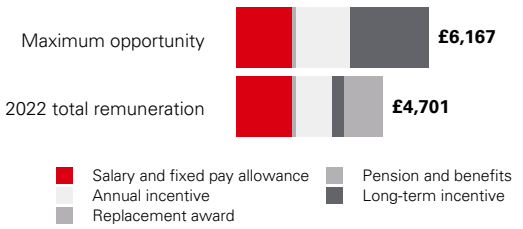
Noel Quinn

Total remuneration (£000)

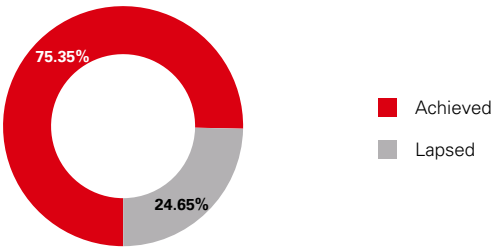


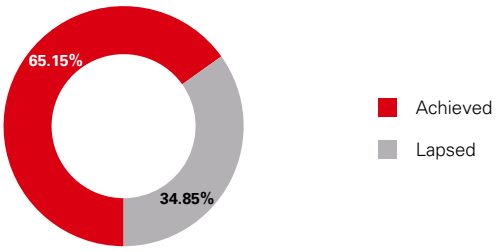
Ewen Stevenson

Total remuneration (£000)



Annual incentive outcome





Shareholding (% of salary)[1]

1 *Executive Directors are expected to meet their shareholding guidelines within five years of the date of their appointment. Noel Quinn and Ewen Stevenson were appointed on 5 August 2019 and 1 January 2019 respectively.*

Remuneration policy summary – executive Directors

This section summarises our remuneration policy for executive Directors. The policy was approved at the AGM on 29 April 2022. The full remuneration policy can be found on pages 257 to 265 of our *Annual Report and Accounts 2021* and in the Directors' Remuneration Policy Supplement, which is available under Group results and reporting in the 'Investors' section of www.hsbc.com.

Elements and objectives	Operation	Implementation in 2023
Base salary	• Base salary is paid in cash on a monthly basis. • Other than in exceptional circumstances, the base salary for the current executive Directors will not increase by more than 15% above the level at the start of the policy period in total for the duration of the policy.	Base salary will not be increased for 2023 and will remain as follows: • Noel Quinn: £1,336,000 • Georges Elhedery: £780,000
Fixed pay allowance ('FPA')	• The FPA is granted in instalments of immediately vested shares. • On vesting, shares equivalent to the net number of shares delivered (after those sold to cover any income tax and social security) are subject to a retention period and released annually on pro-rata basis over five years, starting from the March immediately following the end of the financial year for which the shares are granted. • Dividends are paid on the vested shares held during the vesting period.	FPA for 2023 will not be increased for 2023 and will remain as follows: • Noel Quinn: £1,700,000 • Georges Elhedery: £1,085,000
Cash in lieu of pension	• Cash in lieu of pension is paid on a monthly basis as 10% of base salary. • This allowance, as a percentage of salary, is aligned with the maximum contribution rate, as a percentage of salary, that HSBC could make for a majority of employees who are defined contribution members of the HSBC Bank (UK) Pension Scheme.	• No change to percentage of base salary.
Annual incentive	• The maximum opportunity for the annual incentive is up to 215% of base salary. • Annual incentive performance is measured against an individual scorecard. • At least 50% of any award is delivered in shares, which are normally immediately vested. • On vesting, shares equivalent to the net number of shares that have vested (after those sold to cover any income tax and social security payable) will be held for a retention period of up to one year, or such period as required by regulators. • Awards will be subject to clawback (i.e. repayment or recoupment of paid vested awards) for a period of seven years from the date of award, extending to 10 years in the event of an ongoing internal/regulatory investigation at the end of the seven-year period. Any unvested awards will be subject to malus (i.e. reduction and/or cancellation) during any applicable deferral period.	• No change to quantum. • See page 286 for details of 2023 annual incentive measures.
Long-term incentive ('LTI')	• The maximum opportunity for LTI awards is up to 320% of base salary. • The LTI award is granted if the Committee considers that there has been satisfactory performance over the prior year and subject to a forward-looking three-year performance period from the start of the financial year in which the awards are granted. • At the end of the performance period, awards will vest in five equal instalments, with the first vesting on or around the third anniversary of the grant date and the last instalment vesting on or around the seventh anniversary of the grant date. • On vesting, shares equivalent to the net number of shares that have vested (after those sold to cover any income tax and social security payable) will be held for a retention period of up to one year, or such period as required by regulators. • Awards are subject to malus provisions prior to vesting. Vested shares are subject to clawback for a period of seven years from the date of award, extending to 10 years in the event of an ongoing internal/regulatory investigation at the end of the seven-year period. • Awards may be entitled to dividend equivalents during the vesting period, paid on vesting. Where awards do not receive dividend equivalents, the number of shares awarded can be determined using the share price discounted for the expected dividend yield.	• No change to quantum. • See page 285 for details of performance measures for the LTI awards with a 2023 to 2025 performance period.
Benefits	• Benefits include the provision of medical insurance, accommodation, car, club membership, independent legal advice in relation to a matter arising out of the performance of employment duties for HSBC, tax return assistance or preparation, and travel assistance (including any associated tax due, where applicable). • Additional benefits may also be provided when an executive is relocated or spends a substantial proportion of his/her time in more than one jurisdiction for business needs.	• Benefits to be provided as per policy. Details will be disclosed in the *Annual Report and Accounts 2023* single figure of remuneration table.
Shareholding guidelines	Executive Directors are expected to satisfy the following shareholding requirement as a percentage of base salary within five years from the date of their appointment: • Group Chief Executive: 400% • Group Chief Financial Officer: 300%	• No change to percentage of base salary.
All-employee share plans	Executive Directors are eligible to participate in all-employee share plans, such as HSBC Sharesave, on the same basis as all other employees.	• Participation in any such plans will be disclosed in the *Annual Report and Accounts 2023*, as required.

Our approach to workforce reward

Our refreshed reward proposition

During 2022, the Committee refreshed our reward strategy, to strengthen our focus on inspiring a dynamic culture where the best want to work. This work was underpinned by comprehensive internal and external research, including reviewing two years of feedback and data from our Snapshot and pay surveys, and exit interviews about what makes colleagues join, leave and engaged at HSBC.

Our workforce proposition is rooted in our purpose and values. Our commitment to reward colleagues fairly, along with the opportunity to do inspiring work and contribute within our international network, creates a unique proposition for colleagues. Our refreshed principles and supporting commitments articulate the experience for employees, and provide a clear framework to creating a dynamic culture where the best talent are motivated to deliver high performance. These principles are:

- We will reward you responsibly through fixed pay security and protection through core benefits, a competitive total compensation opportunity, and pay equity with a more inclusive and sustainable benefits proposition over time.
- We will recognise your success through our performance culture and routines, including feedback and recognition, pay for performance, and all employee share ownership opportunities.
- We will support you to grow through our proposition beyond pay, with a focus on future skills and development, your mental, physical, social and financial well-being, and flexibility in working practices.

We live up to many of these commitments today. We will also set new goals to continue to improve over time, with plans to focus on improving colleague sentiment through more transparency and structure in pay design, and better communications on how we make reward decisions.

Aligned with these commitments, we have developed a roadmap to build on our strong benefits and well-being programme, including flexible working, and more inclusive and sustainable benefits.

We have set clear measures and key performance indicators to track our progress, including by listening to colleague feedback.

Supporting colleagues in 2022

In 2022, our colleagues faced a backdrop of increasing economic instability, with rising energy prices and inflation, which increased their cost of living. While we continued to focus on making responsible reward decisions for our colleagues through our annual pay review, we also took a number of actions throughout 2022.

Given this context and our focus on pay security, we allocated more to fixed pay increases than in prior years, and this was based on consistent principles to help address the impact of rising inflation in many of our locations.

In determining 2023 fixed pay increases, we considered the impact of inflation in each market where we operate. Increases were targeted towards more junior and middle management colleagues as fixed pay is a larger proportion of their overall pay. Across the Group, there was an overall increase of 5.5% in fixed pay, compared with 3.6% for 2022. The level of increases varied by market, depending on the economic situation and individual roles.

The distribution of the variable pay pool was differentiated by business performance. There was robust differentiation for individual performance so that our highest performers received meaningful variable pay increases on the previous year. We have protected variable pay for junior colleagues, which is up on average, recognising the inflationary and cost of living challenges experienced across most of our markets.

Considering the macroeconomic environment and cost of living challenges impacting colleagues, we provided specific support to those most affected. For example, in the UK and the Channel Islands we paid our more junior colleagues a one-off payment of £1,500 to help with the cost of living pressures, driven primarily by rising energy costs. In Argentina, Sri Lanka and Türkiye, where colleagues were impacted by inflationary challenges, we gave our colleagues fixed pay increases throughout the year. In other areas we provided our colleagues support in the form of meal vouchers to help with rising food costs, and we increased flexibility around how and where our colleagues work. Some of our colleagues are still significantly impacted by the pandemic and we have ensured support in these specific markets. In mainland China and Hong Kong, we provided care packages and increased well-being sessions. In mainland China, we also delivered food essentials and provided inconvenience allowances. Where colleagues have been impacted by the Russia-Ukraine war we offered free independent and professional counselling, alongside hosting regular public webinars to manage topics such as stress and dealing with anxiety. Our colleagues in Poland have been providing direct assistance to people crossing the border and we quickly made available financial resources for them to continue to directly support refugees.

The well-being of our people remained a critical focus in 2022, and in particular, the financial well-being of our colleagues and their families. Guided by data and colleague feedback, the pillars of our well-being programme are mental, physical, financial and social well-being. Despite the immense challenges, sentiment remained high. A total of 70% of colleagues believe HSBC genuinely cares about their well-being. In a September survey, 84% of colleagues rated their mental well-being as positive, 71% rated their overall physical well-being positively and 60% of colleagues reported their financial well-being as positive.

We measure our colleagues' sentiment on performance and pay through our annual pay review surveys. Considering the challenges colleagues faced, it was encouraging to see that check-ins happened regularly, with 66% of colleagues having frequent conversations with their managers (2021: 60%). Our colleagues tell us that these have a positive impact on their performance, development and well-being, and are important in motivating them to perform at their best.

Throughout the year we recognise our colleagues for demonstrating our values. The 'At Our Best' recognition online platform allows for real-time recognition and communication of positive behaviours by colleagues, in line with our purpose and values. We also run annual spotlight campaigns, with the campaign in 2022 focusing on ESG issues to recognise colleagues for exceptional actions in supporting our need to work responsibly. Our colleagues made over 1.2 million recognitions during 2022, a record high and an 11% increase on the previous year.

Annual report on Directors' remuneration

This section sets out how our approved Directors' remuneration policy was implemented during 2022.

Determining executive Directors' incentive outcomes

(Audited)

For any annual incentive award to be made, each executive Director must achieve a minimum standard of conduct and values-aligned behaviour. For 2022, both executive Directors met this requirement.

The award is determined by applying the outcome of their annual incentive scorecard to the maximum opportunity, which was set at 215% of salary. The scorecard measures, weightings and targets were determined at the start of the financial year taking into account the Group's plan for 2022 and the Group's strategic priorities and commitments. For strategic measures, the assessment was against targets set for employee diversity, survey results for employee experience and customer satisfaction measures, as well as progress made and momentum generated to achieve our strategic priorities.

The Group's financial performance was reflected in the achievement against the measures in the executive Directors' annual scorecards. In particular, the Committee recognised:

- adjusted profit before tax was $24.0bn, which represented an increase of 17% compared with $20.6bn in 2021;
- strong cost controls were demonstrated, despite inflationary pressures and continued investment in technology, with adjusted costs at $30.5bn; and
- RoTE was 9.9%, an improvement on 8.3% in 2021.

Our Employee engagement and Inclusion indices in the Snapshot survey both increased and were above the financial services benchmarks. The percentage of Black heritage colleagues in senior leadership globally increased, as did the percentage of women in senior leadership. For customer satisfaction, NPS performance is assessed with reference to rank movements against our competitors and underlying NPS scores. Performance details for employees and customers measures are set out in the table in the section below.

Overall, this level of performance resulted in a formulaic scorecard outcome of 79.32% of the maximum for Noel Quinn and 76.65% for Ewen Stevenson.

The annual incentive scorecard is also subject to a risk and compliance modifier, which provides the Committee with the discretion to adjust down the overall scorecard outcome. Taking into account the Group's performance against risk metrics, inputs from the Group Risk Committee and the overall accountability of the executive Directors with regards to specific matters around capital management in the year, the Committee used its judgement and applied a downward adjustment of 5% to Noel Quinn's annual incentive outcome and 15% to Ewen Stevenson's. The difference in adjustments reflected the degree of accountability and relative proximity for capital management. This resulted in an adjusted incentive outcome of 75.35% of maximum opportunity for Noel Quinn and 65.15% for Ewen Stevenson. This represented amounts of £2,164,000 for Noel Quinn (2021: £1,590,000) and £1,091,000 for Ewen Stevenson (2021: £978,000).

As detailed in the Chair's letter, the Committee considered carefully the executive Directors' pay outcomes in the context of pay decisions made for the wider workforce and determined that these were an appropriate reflection of Group, business and individual performance delivered in 2022.

Annual incentive scorecard assessment

(Audited)

Summary assessment

				Noel Quinn			Ewen Stevenson		
	Minimum (25% payout)	Maximum (100% payout)	Performance	Weighting (%)	Assessment (%)	Outcome (%)	Weighting (%)	Assessment (%)	Outcome (%)
Group adjusted profit before tax ($bn)	16.66	19.51	24.01	20.00	100.00	20.00	15.00	100.00	15.00
Group lending growth – customer loans and advances (third party)	2.96%	5.93%	1.45%	7.50	—	—	5.00	—	—
Growth in net new invested assets ($bn)	52.36	76.17	79.83	7.50	100.00	7.50	5.00	100.00	5.00
Reported RoTE	3.00%	5.00%	9.90%	15.00	100.00	15.00	15.00	100.00	15.00
Group adjusted cost total ($bn)	30.87	29.47	30.47	10.00	46.43	4.64	10.00	46.43	4.64
Customer satisfaction	See following tables for commentary			15.00	60.33	9.05	15.00	60.33	9.05
Employee experience				15.00	87.50	13.13	15.00	87.50	13.13
Personal objectives				10.00	100.00	10.00	20.00	74.15	14.83
Total				100.00		79.32	100.00		76.65
Annual incentive formulaic outcome (000)						£2,278			£1,284
Risk adjustments as a result of Committee judgement (000)						£(114) 5%			£(193) 15%
Annual incentive (000)						£2,164			£1,091

Strategic measures for Noel Quinn and Ewen Stevenson

	Measures	Weighting (%)	Assessment considerations by the Committee	Assessment (%)	Outcome (%)
Customer satisfaction	Maintain and improve NPS in the UK and Hong Kong, in digital markets, and in key growth markets	**15.00%**	• UK and Hong Kong (assessed at 59%). In WPB, our NPS improved in the UK and Hong Kong, and we were ranked in first place in Hong Kong. In CMB, our NPS improved in Hong Kong but fell in the UK, and we were ranked in second place in Hong Kong. In GBM, our global NPS improved and our global rank remained in fifth. • Digital markets (assessed at 68%). In WPB and CMB digital businesses in Hong Kong, we were ranked in first and third. In GBM globally, our digital trade finance platforms maintained first place for the quality of platforms. Our PayMe payments app was ranked in second place for digital wallets. • Key growth markets (assessed at 54%). In WPB, our NPS improved in mainland China and Singapore, remained unchanged in Mexico, and in India saw a small decrease. In CMB, our NPS increased in mainland China, Singapore and Mexico, and our rank positions in those markets either improved compared with 2021 or were in the top three against competitors.	**60.33%**	**9.05%**
Employee experience	Improve engagement, and diversity and inclusion	**15.00%**	• Our Snapshot Employee engagement and Inclusion indices both increased one percentage point year on year to 73% and 76%, respectively, above maximum targets and the financial services benchmarks. • The percentage of Black heritage colleagues in senior leadership increased by 0.3% to 2.5%, meeting our maximum target. • The percentage of women in senior leadership increased by 1.6% to 33.3% since 2021, within the target range of 33.2% to 33.7%.	**87.50%**	**13.13%**

Personal objectives for Noel Quinn and Ewen Stevenson

For each executive Director, personal objectives were set at the start of the year and measured by the Committee with respect to key performance indicators under our strategy levers.

Noel Quinn	Weighting	Assessment	Performance achievement
Technology transformation	**2.5%**	**100%**	• The Committee's assessment reflects strong progress automating our organisation at scale against targets set. Our Cloud adoption rate, which is the percentage of our technology services on the private or public Cloud, increased to 35% (2021: 27%). At the end of 2022, approximately 49% of our WPB customers were 'mobile active' users (2021: 43%).
Execution of inorganic initiatives in Asia	**2.5%**	**100%**	• The targets for inorganic initiatives were delivered in 2022. We completed the acquisition of L&T Investment Management Limited, making us the 12th largest mutual fund management company in India, bringing in $10.8bn assets under management and 2.4 million active portfolios. We raised our stake in HSBC Qianhai in China to 90%, completed our acquisition of the remaining 50% shares in HSBC Life Insurance in China. We renewed our exclusive life distribution partnership with Allianz in Asia, resulting in the combined group being the fourth largest health insurer and seventh largest life insurer in Singapore.
Progress on exits identified	**2.5%**	**100%**	• The planned sales of our banking business in Canada, branch operations in Greece and business in Russia were announced, reflecting strong progress in reshaping our portfolio.
Progress on innovation programmes	**2.5%**	**100%**	• In CMB, we launched an industry-leading native bank account service with Oracle Netsuite Enterprise Resource Planning. We also launched Business Go, a platform that brings together international SMEs with providers of expert advice and business optimisation tools. In GBM, we launched HSBC Orion, our new proprietary tokenisation platform used for digital bond issuance. In WPB, we launched our international credit offering, allowing customers to gain access to credit in a new country based on credit history in their home country.
Total	**10% out of 10%**		

Ewen Stevenson	Weighting	Assessment	Performance achievement
Finance for the future	**12%**	**67%**	• The financial implications of financed emissions targets for the oil and gas, and power and utilities sectors and for the $750bn to $1tn target were included in our financial resource plan, meeting the objectives set. • The second round of the climate biennial exploratory scenario and stress tests for the Monetary Authority of Singapore and European Central Bank were completed, with no material issues. • Plans have been delivered for IFRS 17 compliant reporting, in line with external reporting and disclosure requirements. • The Bank of England Resolvability Assessment Framework and regulatory reporting enhancement objectives were delivered in line with the targets set. • Resolved 100% of market risk RWA-related issues and over 80% of liquidity-related issues, which were previously identified and managed under the regulatory reporting enhancement programme. • The programme to deliver timely, accurate and complete customer-centric management information using a single data Cloud platform, with enhanced controls and reduced operational risks, is on track to the agreed scope, costs and timeline.
Global Finance employee experience and function efficiency	**4%**	**96%**	• Targets were met with increased Employee engagement index at 75% favourable (2021: 68%). • Female representation in senior management roles across Finance increased to 32.1% (2021: 30.2%). • Finance costs overall were within 2022 targets. The number of FTEs at the end of 2022 was slightly higher than the maximum target, mainly due to growth in key areas where new capabilities are required.
Creating strong corporate development and Group transformation functions	**4%**	**75%**	• The Group Transformation function has made strong progress in aligning our change portfolio to the Group's strategy and systematically documenting a full change inventory. Achievements include clear reporting with associated costs on how the change portfolio is enabling the delivery of Group strategy, and stronger governance of the change portfolio, with an expanded remit of the Transformation Oversight Executive Committee to cover the entire change portfolio with improved accountability via targeted reviews of high impact programmes. • Major transactions included planned sales of our banking business in Canada, branch operations in Greece and business in Russia were announced; the planned merger of Oman operations with Sohar International Bank; the completion of the Axa Singapore acquisition; the sale of US domestic mass market retail banking; and the acquisition of L&T Investment Management Limited in India.
Total	**14.83% out of 20%**		

Single figure of remuneration

(Audited)

The following table shows the single figure of total remuneration of each executive Director for 2022, together with comparative figures.

Single figure of remuneration

	Noel Quinn		Ewen Stevenson	
(£000)	**2022**	2021	**2022**	2021
Base salary[1]	**1,329**	1,288	**775**	751
Fixed pay allowance ('FPA')[1]	**1,700**	1,700	**1,085**	1,062
Cash in lieu of pension	**133**	129	**77**	75
Taxable benefits[2]	**119**	95	**7**	3
Non-taxable benefits[2]	**86**	71	**50**	42
Total fixed	**3,367**	3,283	**1,994**	1,933
Annual incentive	**2,164**	1,590	**1,091**	978
Notional returns[3]	**31**	22	**—**	—
Replacement award[4]	**—**	—	**1,180**	754
Long term incentive[5]	**—**	—	**436**	—
Total variable	**2,195**	1,612	**2,707**	1,732
Total fixed and variable	**5,562**	4,895	**4,701**	3,665

1 *Executive Directors made the personal decision to donate 100% of their base salary increases for 2021 to charity. Ewen Stevenson also donated his FPA increase for 2021 to charity. Figures in the table above are the gross figures before charitable donations.*
2 *Taxable benefits include the provision of medical insurance, car and tax return assistance (including any associated tax due, where applicable). Non-taxable benefits include the provision of life assurance and other insurance cover.*
3 *The deferred cash awards granted in prior years include a right to receive notional returns for the period between the grant and vesting date. This is determined by reference to a rate of return specified at the time of grant and paid annually, with the amount disclosed on a paid basis.*
4 *In 2019, Ewen Stevenson was granted replacement awards to replace unvested awards, which were forfeited as a result of him joining HSBC. The awards, in general, match the performance, vesting and retention periods attached to the awards forfeited. The values included in the table for 2022 relate to his 2018 replacement award granted by the Royal Bank of Scotland Group plc, now renamed as NatWest Group plc ('NatWest') for performance year 2018 and was subject to a pre-vest performance test assessed and disclosed by NatWest in its* Annual Report and Accounts 2021 *(page 158). As no adjustment was proposed for Ewen Stevenson by NatWest, a total of 241,988 shares granted in respect of his 2018 replacement award ceased to be subject to performance conditions. These awards were granted at a share price of £6.643 and the HSBC share price was £4.8772 when the first tranche of these awards vested and all tranches were no longer subject to performance conditions, with no value attributable to share price appreciation. The values included in the table for 2021 are explained in the* Annual Report and Accounts 2021.
5 *An LTI award over 476,757 shares was made in February 2020 (in respect of 2019) at a share price of £5.6220 for which the performance period ended on 31 December 2022. The value has been computed based on a share price of £4.816, the average share price during the three-month period to 31 December 2022. There is no value attributable to share price appreciation. See the following section for details of the assessment outcomes, which resulted in 19% vesting due to performance.*

Benefits

The values of the significant benefits in the single figure table are set out in the following table[1]. The insurance benefit for Noel Quinn has increased year on year because of the increase in premium at annual renewal.

	Noel Quinn	
(£000)	**2022**	2021
Insurance benefit (non-taxable)	**82**	67
Car and driver (UK and Hong Kong)	**69**	87

1 *The insurance and car benefits for Ewen Stevenson are not included in the above table as they were not deemed significant.*

Long-term incentive ('LTI') awards

(Audited)

LTI awards over 2020 to 2022 performance period

The 2019 LTI award was granted to Ewen Stevenson in February 2020. Noel Quinn did not receive a 2019 LTI award. Based on the performance outcome, 90,584 shares will vest for Ewen Stevenson. The awards will vest in five equal annual instalments commencing in February 2023.

The Committee is mindful of executives not experiencing 'windfall gains' through the granting of LTI awards when a share price is particularly low. We introduced an upfront windfall gains check for 2020 LTI awards. The Committee agreed that if the LTI grant share price experienced a greater than 30% decline since the previous grant, that an adjustment percentage equal to half the share price percentage decline would be applied to the awards to mitigate the potential for windfall gains. Although this was not in place for the 2019 LTI award, no pre-grant adjustment would have been applied if it had been. The value of awards at vesting is less than at grant and the Committee determined that there are no windfall gains to consider for this award.

Assessment of the 2019 LTI award (performance period 1 January 2020 to 31 December 2022)

Measures (weighting)[1]	Minimum (25% payout)	Target (50% payout)	Maximum (100% payout)	Actual	Assessment	Outcome
Average RoTE with CET1 underpin[2] (33.3%)	10.0%	11.0%	12.0%	9.9%	0.0%	0.00%
Relative TSR[3] (33.3%)	At median of the peer group	Straight-line vesting between minimum and maximum	At upper quartile of peer group	Below median	0.0%	0.00%
Customers (33.3%)	Performance was assessed by the Committee based on: • customer satisfaction scores at the start and end of the three-year performance period for our global businesses in home and scale markets, which resulted in a formulaic 64% outcome. This comprised: – UK and Hong Kong (assessed at 58%) – in WPB and CMB, we were ranked in first and second place in Hong Kong, with improved NPS scores. In GBM, our global NPS improved and our global rank remained in fifth; – Digital markets (assessed at 77%) – in WPB and CMB digital markets, we were ranked in top three positions in Hong Kong, and in GBM globally, our digital trade finance platforms were ranked in first place; and – Key growth markets (assessed at 56%) – in WPB, our NPS increased in mainland China, Singapore and Mexico, and in India saw a small decline, and in CMB, our NPS increased in Mexico, with slight decreases in the other markets, but our rank positions in all four markets were in the top three against competitors. • progress against customer objectives linked to our strategy over 2020 to 2022. It was determined that it broadly represented target performance and therefore 50% of this element was achieved. The main items driving this assessment are our growth in international and Premier customers and in specific growth markets, where our overall performance has been broadly in line with plan and expectations. These two percentages (64% and 50%) averaged to 57%.				57.0%	19.00%
Total						19.00%

1 *Awards vest on a straight-line basis for performance between the minimum, target and maximum levels of performance set in this table.*
2 *Assessed based on RoTE in the 2022 financial year, which was not met. The CET1 underpin was met.*
3 *The peer group was: Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse Group, DBS Group Holdings, Deutsche Bank, J.P. Morgan Chase & Co., Lloyds Banking Group, Morgan Stanley, Standard Chartered and UBS Group.*

LTI awards over 2023 to 2025 performance period

After taking into account performance for 2022, the Committee decided to grant Noel Quinn an LTI award of £4,275,000.

The 2022 LTI awards will have a three-year performance period starting 1 January 2023. During this period, performance will be assessed based on four equally weighted measures: two financial measures to incentivise value creation for our shareholders; a measure linked to our climate ambitions; and relative total shareholder return ('TSR'). This is consistent with the measures used for our last LTI awards.

The Committee regularly reviews the TSR peer group to ensure it remains an appropriate performance comparison, taking into account strategic shifts in our geographical and business mix, notably future growth investment in Asia and wealth business. Following feedback from some of our shareholders, the Committee reviewed the TSR performance peer group, with the objective of including more Asian peers to better reflect the balance of markets and businesses of the Group. The new peer group will be used for the relative TSR measure for LTI awards for the 2023 to 2025 performance period and now includes Bank of China (Hong Kong), China Merchants Bank and OCBC Bank. No change will be made to the performance peer group for subsisting LTI awards.

The LTI continues to be subject to a risk and compliance modifier, which gives the Committee the discretion to adjust down the overall outcome to ensure that the Group operates soundly when achieving its financial targets. For this purpose, the Committee will receive information including any risk metrics outside of tolerance for a significant period of time and any risk management failures that have resulted in significant customer detriment, reputational damage and/or regulatory censure.

The RoTE and capital reallocation to Asia measures are also subject to a CET1 underpin. If the CET1 ratio at the end of the performance period is below the CET1 risk tolerance level set in the risk appetite statement, then the assessment for these measures will be reduced to nil.

As the awards are not entitled to dividend equivalents in accordance with regulatory requirements, the number of shares to be awarded will be adjusted to reflect the expected dividend yield of the shares over the vesting period.

To the extent performance conditions are satisfied at the end of the three-year performance period, the awards will vest in five equal annual instalments commencing from around the third anniversary of the grant date. On vesting, shares equivalent to the net number of shares that have vested (after those sold to cover any income tax and social security payable) will be held for a retention period of up to one year, or such period as required by regulators.

Performance conditions for LTI awards in respect of 2022 (performance period 1 January 2023 to 31 December 2025)

Measures[1]		Minimum (25% payout)	Target (50% payout)	Maximum (100% payout)	Weighting %
RoTE with CET1 underpin[2]		13.0%	14.3%	15.5%	25.0
Capital reallocation to Asia with CET1 underpin[3]		49.0%	50.5%	52.0%	25.0
Transition to net zero[4]	**Carbon reduction (own emissions)**	64.0%	68.0%	72.0%	25.0
	Sustainable finance and investment	$588.0bn	$700.0bn	$756.0bn	
Relative TSR[5]		At the median of the peer group	Straight-line vesting between minimum and maximum	At the upper quartile of the peer group	25.0
Subject to risk and compliance modifier					

1 *Awards will vest on a straight-line basis for performance between the minimum, target and maximum levels of performance set in this table.*
2 *To be assessed based on RoTE at the end of the performance period. This metric will be subject to the CET1 underpin.*
3 *To be assessed based on share of Group tangible equity (on a reported basis and excluding associates) allocated to Asia by 31 December 2025. This metric will be subject to the CET1 underpin.*
4 *Carbon reduction will be measured based on percentage reduction in total energy and travel emissions achieved by 31 December 2025 using 2019 as the baseline. The sustainable finance and investment metric will assess the cumulative amount provided and facilitated over the period ending 31 December 2025.*
5 *The peer group for the 2022 award is: Bank of China (Hong Kong), Barclays, BNP Paribas, China Merchants Bank, Citigroup, DBS Group Holdings, JP Morgan Chase & Co., Lloyds Banking Group, OCBC Bank, Standard Chartered and UBS Group.*

Annual incentive measures for 2023

The 2023 annual incentive scorecard measures for our executive Directors have been set to deliver growth and business transformation. They were selected by the Committee after taking into account the Group's strategic pivot to Asia and feedback received from our major shareholders during engagement in the year. The targets have been set to reflect the Group's 2023 plan, while considering macroeconomic uncertainty, including the interest-rate environment and rising inflation.

The Committee will continue to retain discretion to adjust the formulaic outcomes of scorecards, taking into account factors such as Group profits, wider business performance and stakeholder experience, to ensure executive reward is aligned with underlying Group performance and the broader stakeholder experience.

The weightings and performance measures for the 2023 annual incentive award for executive Directors are disclosed below. In previous years, the weightings were different for the Group Chief Executive and Group Chief Financial Officer. For 2023, these have been aligned, reflecting feedback from shareholders and to simplify our approach. The performance targets are commercially sensitive and it would be detrimental to the Group's interests to disclose them at the start of the financial year. Subject to commercial sensitivity, we will disclose the targets for a given year in the Directors' remuneration report for that year.

2023 annual incentive performance measures	Weighting
Financial (subject to CET1 underpin)	**60%**
Reported profit before tax	15%
Reported operating expenses	15%
Reported Group RoTE	15%
Reported Asia RoTE	5%
Fee income growth	5%
Net new invested assets growth	5%
Stakeholders	**30%**
Customer satisfaction *(improvement in NPS scores/rank)*	15%
Employee experience *(gender and ethnicity representation and Inclusion index score)*	15%
Personal objectives *Group Chief Executive: technology transformation, innovation, and simplification of processes and organisation* *Group Chief Financial Officer: regulatory priorities (regulatory reporting enhancement programme, resolution recovery planning, and ESG and climate), Finance change transformation and digitisation, energised Finance workforce, and liquidity usage and capital management*	**10%**
Subject to risk and compliance modifier	

Scheme interests awarded during 2022

(Audited)

The table below sets out the scheme interests granted to executive Directors during 2022 in respect of performance year 2021, as disclosed in the 2021 Directors' remuneration report. No non-executive Directors received scheme interests during the financial year.

Scheme awards in 2022

(Audited)

	Type of interest awarded	Basis on which award made	Date of award	Face value awarded[1] £000	Percentage receivable for minimum performance	Number of shares awarded	End of performance period
Noel Quinn	LTI deferred shares[2]	% of salary[2]	**28 February 2022**	**5,290**	**25**	**983,339**	**31 December 2024**
Ewen Stevenson	LTI deferred shares[2]	% of salary[2]	**28 February 2022**	**3,086**	**25**	**573,674**	**31 December 2024**

1 *The face value of the award has been computed using HSBC's closing share price of £5.380 taken on 25 February 2022. LTI awards are conditional share awards subject to a three-year forward-looking performance period and vest in five equal annual instalments, between the third and seventh anniversary of the award date, subject to performance achieved. On vesting, awards will be subject to a one-year retention period. Awards are subject to malus during the vesting period and clawback for a maximum period of 10 years from the date of the award.*

2 *In line with regulatory requirements, scheme interests awarded during 2022 were not eligible for dividend equivalents. In accordance with the remuneration policy approved by shareholders at the 2019 AGM, the LTI award was determined at 320% of salary for Noel Quinn and 320% of salary for Ewen Stevenson. The number of shares to be granted was determined by taking HSBC's closing share price of £5.380 taken on 25 February 2022, and applying a discount based on HSBC's expected dividend yield of 5% per annum for the vesting period (£4.201).*

The above table does not include details of shares issued as part of the fixed pay allowance and shares issued as part of the 2021 annual incentive award that vested on grant and were not subject to any further service or performance conditions. Details of the performance measures and targets for the 2021 LTI award are below:

Performance conditions for LTI awards in respect of 2021 (performance period 1 January 2022 to 31 December 2024)

(Audited)

Measures[1]		Minimum (25% payout)	Target (50% payout)	Maximum (100% payout)	Weighting %
RoTE (with CET1 underpin)[2]		8.0%	9.5%	11.0%	25.0
Capital reallocation to Asia (with CET1 underpin)[3]		46.0%	48.0%	50.0%	25.0
Environment and sustainability[4]	**Carbon reduction**	52.0%	56.0%	60.0%	25.0
	Sustainable finance and investment	$285.0bn	$340.0bn	$370.0bn	
Relative TSR[5]		At median of the peer group	Straight-line vesting between minimum and maximum	At upper quartile of peer group	25.0

1 *Awards will vest on a straight-line basis for performance between the minimum, target and maximum levels of performance set in this table.*

2 *To be assessed based on RoTE at the end of the performance period. The measure will also be subject to a CET1 underpin. If the CET1 ratio at the end of the performance period is below the CET1 risk tolerance level set in the risk appetite statement, then the assessment for this measure will be reduced to nil.*

3 *To be assessed based on share of Group tangible equity (on a constant currency basis and excluding associates) allocated to Asia by 31 December 2024. This metric will be subject to the CET1 underpin outlined above.*

4 *Carbon reduction will be measured based on percentage reduction in total energy and travel emissions achieved by 31 December 2024 using 2019 as the baseline. The sustainable finance and investment metric will assess cumulative financing provided over the period commencing on 1 January 2020 and ending on 31 December 2024.*

5 *The peer group for the 2021 award is: Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse Group, DBS Group Holdings, Deutsche Bank, J.P. Morgan Chase & Co., Lloyds Banking Group, Morgan Stanley, Standard Chartered and UBS Group.*

Executive Directors' interests in shares

(Audited)

The shareholdings of executive Directors in 2022, including the shareholdings of their connected persons, at 31 December 2022 (or the date they stepped down from the Board, if earlier) are set out below. The following table shows the comparison of shareholdings with the company shareholding guidelines. There have been no changes in the shareholdings of the executive Directors from 31 December 2022 to the date of this report.

Individuals have five years from their appointment date to build up the recommended levels of shareholding. In line with investor guidance, for executive Directors, unvested shares that are not subject to forward-looking performance conditions (on a net of tax basis) will count towards their shareholding requirement under the shareholder-approved policy.

The Committee reviews compliance with the shareholding requirement and has full discretion in determining if any unvested shares should be taken into consideration for assessing compliance with this requirement, taking into account shareholder expectations and guidelines. The Committee also has full discretion in determining any penalties for non-compliance.

With regard to post-employment shareholding arrangements, we believe that our remuneration structure achieves the objective of ensuring there is ongoing alignment of executive Directors' interests with shareholder experience post-cessation of their employment due to the following features of the policy:

- Shares delivered to executive Directors as part of the fixed pay allowance have a five-year retention period, which continues to apply following a departure of an executive Director.
- Shares delivered as part of an annual incentive award are subject to a one-year retention period, which continues to apply following a departure of an executive Director.
- LTI awards have a seven-year vesting period with a one-year post-vesting retention period, which is not accelerated on departure. The weighted average holding period of an LTI award within HSBC is therefore six years, in excess of the five-year holding period typically implemented by FTSE-listed companies. When an executive Director ceases employment as a good leaver under our policy, any LTI awards granted will continue to be released over a period of up to eight years, subject to the outcome of performance conditions.

HSBC operates a policy under which individuals are not permitted to enter into any personal hedging strategies in relation to HSBC shares subject to a vesting and/or retention period.

Shares

(Audited)

			At 31 Dec 2022			
				Scheme interests		
					Shares awarded subject to deferral[1]	
	Shareholding guidelines (% of salary)	Shareholding at 31 Dec 2022[2] (% of salary)	Share interests (number of shares)	Share options[3]	without performance conditions[4]	with performance conditions[5]
Executive Directors						
Noel Quinn[6]	400%	**513%**	**1,422,650**	**—**	**415,771**	**2,101,893**
Ewen Stevenson[6]	300%	**658%**	**1,064,626**	**—**	**383,587**	**1,687,628**

1 *The gross number of shares is disclosed. A portion will be sold at vesting to cover any income tax and social security that falls due at the time of vesting.*
2 *The value of the shareholding is calculated using an average of the daily closing share prices in the three months to 31 December 2022 (£4.816).*
3 *At 31 December 2022, Noel Quinn and Ewen Stevenson did not hold any options under the HSBC Holdings Savings-Related Share Option Plan (UK).*
4 *The amount for Ewen Stevenson reflects the award granted in May 2019, replacing the 2015 to 2018 LTIs forfeited by the Royal Bank of Scotland Group plc, now renamed as NatWest Group plc ('NatWest'), and is subject to any performance adjustments assessed and disclosed in the relevant NatWest Annual Report and Accounts.*
5 *LTI awards granted in February 2021 and 2022 are subject to the performance conditions as set out in the preceding sections above.*
6 *Executive Directors are expected to meet their shareholding guidelines within five years of the date of their appointment (Noel Quinn and Ewen Stevenson were appointed on 5 August 2019 and 1 January 2019, respectively).*

Service contracts

The service contracts of executive Directors do not have a fixed term. The notice periods of executive Directors are set at the discretion of the Committee, taking into account market practice, governance considerations, and the skills and experience of the particular candidate at that time.

Service agreements for each executive Director are available for inspection at HSBC Holdings' registered office. Consistent with the best interests of the Group, the Committee will seek to minimise termination payments. Directors may be eligible for a payment in relation to statutory rights.

	Contract date (rolling)	Notice period (Director and HSBC)
Noel Quinn	18 March 2020	12 months
Ewen Stevenson	1 December 2018	12 months

Total pension entitlements

(Audited)

No employees who served as executive Directors during the year have a right to amounts under any HSBC final salary pension scheme for their services as executive Directors or are entitled to additional benefits in the event of early retirement. There is no retirement age set for Directors, but the normal retirement age for colleagues is 65.

Payments to past Directors

(Audited)

No payments were made to, or in respect of, former Directors in the year in excess of the minimum threshold of £50,000 set for this purpose.

Payments for loss of office

(Audited)

Departure terms for Ewen Stevenson

Ewen Stevenson is leaving the Group on 30 April 2023. He will receive payments totalling £703,519 from the Group in lieu of his base salary and pension allowance from 1 January until 25 October 2023. He will also receive his fixed pay allowance in respect of the same period, which totals £885,836, and will be awarded in immediately vested shares. The fixed pay allowance will be subject to a retention period and released on a pro-rata basis over five years.

Ewen Stevenson will not be eligible for an LTI award in respect of the 2022 performance year, or any annual incentive award in respect of the 2023 performance year.

In accordance with the contractual terms agreed and our approved Directors' remuneration policy, Ewen Stevenson was granted good leaver status in respect of his outstanding unvested share awards. Good leaver status is conditional upon him not taking up a role with a defined list of competitor financial services firms for a year from his departure date. As a good leaver, his deferred share awards will continue to vest and be released on their scheduled vesting dates, subject to the relevant terms (including post-vesting retention periods, malus and, where applicable, clawback). Any vesting of his LTI awards will be pro-rated for the period up to the departure date and will be subject to the relevant terms (including post-vesting retention periods, malus and clawback) and the achievement of the required performance conditions. For this purpose, his 2020 and 2021 LTI awards have been pro-rated for time with the maximum number of shares, being 495,597 and 254,966 respectively, still subject to performance.

The Group will make a contribution towards Ewen Stevenson's legal fees incurred in connection with his departure arrangements. In line with the Directors' remuneration policy, Ewen Stevenson will be eligible to receive certain post-departure benefits for a period of up to seven years after the departure date.

Ewen Stevenson will receive no other compensation or payment for the termination of his service agreement or his ceasing to be a Director of the Group.

No other payments for loss of office were made to, or in respect of, former or current Directors in the year.

External appointments

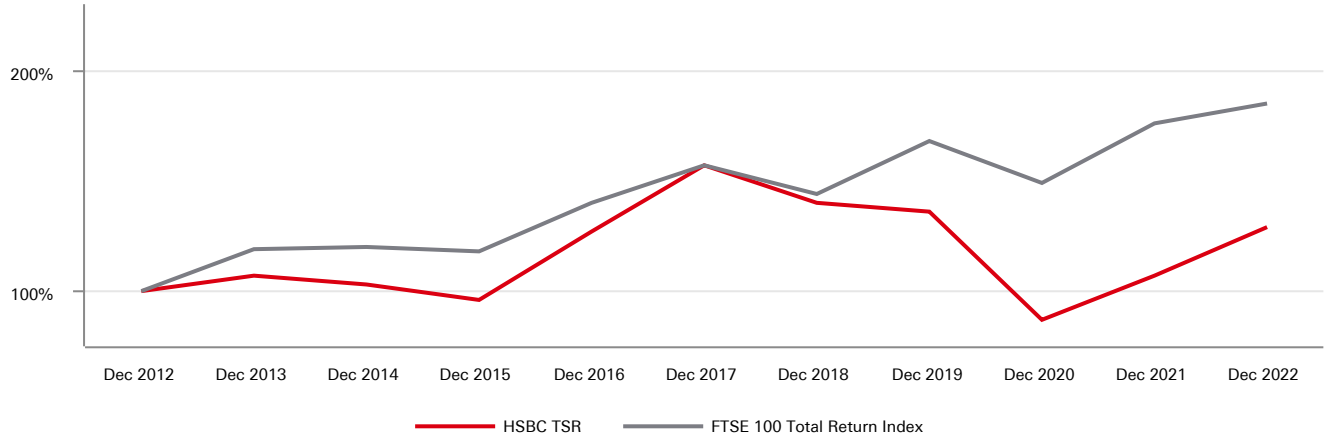
During 2022, executive Directors did not receive any fees from external appointments.

Summary of shareholder return and Group Chief Executive remuneration

The graph shows HSBC TSR performance (based on the daily spot Return Index in sterling) against the FTSE 100 Total Return Index for the 10-year period ended 31 December 2022.

The FTSE 100 Total Return Index has been chosen as a recognised broad equity market index of which HSBC Holdings is a member. The single figure remuneration for the Group Chief Executive over the past 10 years, together with the outcomes of the respective annual incentive and LTI awards, are presented in the following table.

HSBC TSR and FTSE 100 Total Return Index



	2013	2014	2015	2016	2017	2018		2019		2020	2021	**2022**
Group Chief Executive	Stuart Gulliver	Stuart Gulliver	Stuart Gulliver	Stuart Gulliver	Stuart Gulliver	Stuart Gulliver	John Flint	John Flint	Noel Quinn	Noel Quinn	Noel Quinn	**Noel Quinn**
Total single figure £000	8,033	7,619	7,340	5,675	6,086	2,387	4,582	2,922	1,977	4,154	4,895	**5,562**
Annual incentive[1] (% of maximum)	49%	54%	45%	64%	80%	76%	76%	61%	66%	32%	57%	**75%**
Long-term incentive[1,2,3] (% of maximum)	49%	44%	41%	–%	–%	100%	–%	–%	–%	–%	–%	**–%**

1 *The 2012 annual incentive figure for Stuart Gulliver includes 60% of the annual incentive disclosed in the 2012 Directors' remuneration report, which was deferred for five years and subject to service conditions and satisfactory completion of the five-year deferred prosecution agreement with the US Department of Justice, entered into in December 2012 ('AML DPA') as determined by the Committee. The AML DPA performance condition was met and the award vested in 2018. The value of the award at vesting was included in the 2018 single figure of remuneration and included as long-term incentive for 2018.*

2 *Long-term incentive awards are included in the single figure for the year in which the performance period is deemed to be substantially completed. For Group Performance Share Plan ('GPSP') awards, this is the end of the financial year preceding the date of grant. GPSP awards shown in 2013 to 2015 are therefore related to awards granted in 2014 to 2016.*

3 *The GPSP was replaced by the LTI in 2016 and the value for GPSP is nil for 2016 as no GPSP award was made for 2016. LTI awards have a three-year performance period and the first LTI award was made in February 2017. The value of the LTI awards expected to vest will be included in the total single figure of remuneration of the year in which the performance period ends. Noel Quinn did not receive the 2019 LTI award that had a performance period ended on 31 December 2022.*

Voting results from Annual General Meeting

2022 Annual General Meeting voting results

	For	Against	Withheld
Remuneration report (votes cast)	**95.83%**	**4.17%**	**—**
	7,675,588,519	**334,152,471**	**6,830,718**
Remuneration policy (votes cast)	**95.73%**	**4.27%**	**—**
	7,666,488,029	**342,320,697**	**7,773,468**

Group Remuneration Committee

The Group Remuneration Committee is responsible for setting the overarching principles, parameters and governance of the Group's remuneration framework for our colleagues, and the remuneration of executive Directors, the Group Chairman and other senior Group colleagues. The Committee regularly reviews the framework to ensure it supports the Group's purpose, values, culture and strategy, as well as promoting sound risk management. The Committee also reviews the framework to satisfy itself that it complies with the regulatory requirements of multiple jurisdictions.

All members of the Committee are independent non-executive Directors of HSBC Holdings plc. No Directors are involved in deciding their own remuneration. A copy of the Committee's terms of reference can be found on our website at www.hsbc.com/who-we-are/leadership-and-governance/board-committees.

The Committee met six times during 2022. Pauline van der Meer Mohr stepped down from the Committee and the Board after the 2022 AGM, and was succeeded as Group Remuneration Committee Chair by Dame Carolyn Fairbairn. Geraldine Buckingham was appointed as a member of the Committee in June 2022. The following is a summary of the Committee's key activities during 2022.

Matters considered during 2022

	Jan	Feb	May	Jul	Sep	Dec
Remuneration framework and governance						
Group variable pay pool, workforce performance and pay matters, pay gap report, and employee insights	●	●	●	●	●	●
Directors' remuneration policy design	●	○	○	○	○	○
Executive Director remuneration policy implementation, scorecards and pay proposals	●	●	●	●	●	●
Remuneration for other senior executives of the Group	●	●	●	●	●	●
Directors' remuneration report	●	●	○	○	○	●
Regulatory, risk and governance						
Information on material risk and audit events, and performance and remuneration impacts for individuals involved	●	●	●	●	●	●
Regulatory updates, including approach and outcomes for the identification of Material Risk Takers	●	●	●	●	●	●
Governance matters	●	●	●	●	●	●
Principal subsidiaries						
Matters from subsidiary committees	●	○	●	●	●	●

● *Matter considered* ○ *Matter not considered*

Advisers

The Committee received input and advice from different advisers on specific topics during 2022. Deloitte provided independent advice to the Committee. Deloitte also provided tax compliance and other advisory services to the Group in 2022. Deloitte is a founding member of the Remuneration Consultants Group and voluntarily operates under the code of conduct in relation to executive remuneration consulting in the UK.

The Committee also received advice from Willis Towers Watson on market data and remuneration trends. Willis Towers Watson provides actuarial support to Global Finance and benchmarking data and services related to benefits administration for our Group employees. The Committee was satisfied the advice provided by Deloitte and Willis Towers Watson was objective and independent in 2022.

For 2022, total fees of £203,800 and £79,803 were incurred in relation to remuneration advice provided by Deloitte and Willis Towers Watson, respectively. This was based on pre-agreed fees and a time-and-materials basis.

During the year, the Committee conducted a tender process for its independent remuneration adviser. This involved participating firms submitting proposals and meeting with the Committee Chair and management. Following this process, Deloitte was reappointed as the Committee's independent advisers.

Attendees and interaction with other Board committees

During the year, Noel Quinn as the Group Chief Executive provided regular briefings to the Committee. In addition, the Committee engaged with, and received updates from, the following:

- Mark Tucker, Group Chairman;
- Elaine Arden, Group Chief Human Resources Officer;
- Ewen Stevenson, who was Group Chief Financial Officer until 31 December 2022;
- Jenny Craik, Group Head of Performance, Reward and Employee Relations;
- Pam Kaur, Group Chief Risk and Compliance Officer;
- Bob Hoyt, Group Chief Legal Officer;
- Shawn Chen, former Global General Counsel for Litigation and Regulatory Enforcement;
- Maureen Lewis, Interim Global General Counsel for Litigation and Investigation; and
- Aileen Taylor, Group Company Secretary and Chief Governance Officer.

The Committee also received feedback and input from the Group Risk Committee and Group Audit Committee on risk, conduct and compliance-related matters relevant to remuneration.

No Director is present at Group Remuneration Committee meetings when their own remuneration is discussed.

In addition to the meetings above, the Group Risk Committee convened two joint meetings with the Group Remuneration Committee in September 2022 and December 2022. They reviewed the Group's risk and reward alignment framework, which is designed to promote sound and effective risk management in meeting PRA and FCA remuneration rules and expectations.

Committee effectiveness

The annual review of the effectiveness of the Board committees, including the Group Remuneration Committee, was conducted internally in 2022, led by the Group Company Secretary and Chief Governance Officer. Overall, the review concluded that the Committee continued to operate effectively and in line with regulatory requirements.

Areas for continued enhancement were identified, including the need to focus on: a differentiated, fair and transparent reward framework; ESG performance metrics; and in particular, sustainability; the development of climate performance measures aligned to strategic net zero goals; and greater coordination with the Group Risk Committee. Given the anticipated changes to remuneration regulations and evolving shareholder views on remuneration, a structured training programme will be developed and delivered by the Committee's independent remuneration advisers. The outcomes of the 2022 annual review have been reported to the Board, and the Group Remuneration Committee will track the progress in implementing recommendations during 2023.

Non-executive Directors

(Audited)

The following table shows the total fees and benefits of non-executive Directors for 2022, together with comparative figures for 2021.

Fees and benefits

(Audited)	Fees[1]		Benefits[2]		Total	
(£000)	**2022**	2021	**2022**	2021	**2022**	2021
Geraldine Buckingham[3]	**155**	—	**—**	—	**155**	—
Rachel Duan[4]	**225**	67	**5**	—	**230**	67
Dame Carolyn Fairbairn[5]	**265**	80	**1**	—	**266**	80
James Forese[6]	**689**	572	**—**	—	**689**	572
Steven Guggenheimer	**262**	250	**10**	—	**272**	250
Irene Lee[7]	**488**	556	**—**	—	**488**	556
José Antonio Meade Kuribreña[8]	**242**	223	**14**	—	**256**	223
Pauline van der Meer Mohr[9]	**92**	291	**18**	—	**110**	291
Eileen Murray[10]	**262**	266	**—**	—	**262**	266
David Nish	**477**	482	**22**	10	**499**	492
Jackson Tai	**377**	350	**25**	—	**402**	350
Mark Tucker	**1,500**	1,500	**113**	33	**1,613**	1,533
Total (£000)	**5,034**	4,637	**208**	43	**5,242**	4,680
Total ($000)	**6,199**	5,710	**256**	53	**6,455**	5,763

1 *Fees are in line with the Directors' remuneration policy that was approved at the 2022 AGM. No travel allowance was paid to non-executive Directors during 2021 due to travel restrictions. The payment of the travel allowance of £4,000 per annum (pro-rata) was paid following the resumption of travel by the Board in 2022.*
2 *Benefits include taxable expenses such as accommodation, travel and subsistence relating to attendance at Board and other meetings at HSBC Holdings' registered offices. Amounts disclosed have been grossed up using a tax rate of 45%, where relevant.*
3 *Appointed to the Board and the Group Nomination & Corporate Governance Committee on 1 May 2022, and appointed as a member of the Group Remuneration Committee and Group Risk Committee on 1 June 2022.*
4 *Appointed as a member of the Group Audit Committee on 1 June 2022.*
5 *Appointed as Chair of the Group Remuneration Committee effective 29 April 2022.*
6 *Stepped down as a member of the Group Audit Committee on 1 June 2022 and joined the Group Risk Committee on 1 June 2022. Includes fees of £447,000 (2021: £332,000) in relation to his role as Chair of HSBC North America Holdings, Inc. This fee was deferred for 2022.*
7 *Retired from the Board effective 29 April 2022. Includes fees of £434,000 (2021: £380,000) in relation to her roles as non-executive Director and Remuneration Committee Chair, Audit Committee member and Risk Committee member of The Hongkong and Shanghai Banking Corporation Limited and non-executive Chair, Nomination Committee Chair and member of the Audit, Risk and Remuneration Committees of Hang Seng Bank Limited.*
8 *Retired from the Group Risk Committee on 1 June 2022. Appointed as the designated workforce engagement non-executive Director on 1 June 2022.*
9 *Retired from the Board effective 29 April 2022.*
10 *Retired from the Group Risk Committee on 1 June 2022, and appointed as a member of Group Audit Committee on 1 June 2022.*

Non-executive Directors' interests in shares

(Audited)

The shareholdings of persons who were non-executive Directors in 2022, including the shareholdings of their connected persons, at 31 December 2022, or date of cessation as a Director if earlier, are set out below.

Non-executive Directors are expected to meet the shareholding guidelines within five years of the date of their appointment. All non-executive Directors who had been appointed for five years or more at 31 December 2022 met the guidelines.

Shares

	Shareholding guidelines (number of shares)	**Share interests (number of shares)**
Geraldine Buckingham (appointed to the Board on 1 May 2022)	15,000	**15,000**
Rachel Duan	15,000	**15,000**
Dame Carolyn Fairbairn	15,000	**15,000**
James Forese	15,000	**115,000**
Steven Guggenheimer	15,000	**15,000**
Irene Lee (retired on 29 Apr 2022)	15,000	**15,000**
José Antonio Meade Kuribreña	15,000	**15,000**
Eileen Murray	15,000	**75,000**
David Nish	15,000	**50,000**
Jackson Tai	15,000	**66,515**
Mark Tucker	15,000	**307,352**
Pauline van der Meer Mohr (retired on 29 Apr 2022)	15,000	**15,000**

2023 fees for non-executive Directors

The table below sets out the 2023 fees for non-executive Directors.

Position		2023 fees £
Non-executive Group Chairman[1]		**1,500,000**
Non-executive Director (base fee)		**127,000**
Senior Independent Director		**200,000**
Group Risk Committee	Chair	**150,000**
	Member	**40,000**
Group Audit Committee and Group Remuneration Committee	Chair	**75,000**
	Member	**40,000**
Nomination & Corporate Governance Committee	Chair	**—**
	Member	**33,000**
Technology Governance Working Group	Co-Chair	**60,000**
Designated workforce engagement non-executive Director		**40,000**

1 *The Group Chairman does not receive a base fee or any other fee in respect of chairing of the Nomination & Corporate Governance Committee.*

Service contracts

Non-executive Directors are appointed for fixed terms not exceeding three years, which may be renewed subject to their re-election by shareholders at AGMs. Non-executive Directors do not have service contracts, but are bound by letters of appointment issued for and on behalf of HSBC Holdings, which are available for inspection at HSBC Holdings' registered office. There are no obligations in the non-executive Directors' letters of appointment that could give rise to remuneration payments or payments for loss of office.

2023 AGM	2024 AGM	2025 AGM
Geraldine Buckingham[1]	James Forese	Rachel Duan
Kalpana Morparia[1]	Steven Guggenheimer	Dame Carolyn Fairbairn
David Nish	Eileen Murray	José Antonio Meade Kuribreña
	Mark Tucker	

1 *Geraldine Buckingham and Kalpana Morparia were appointed following the 2022 AGM and therefore their initial three-year appointment terms are subject to approval of their election by shareholders at the 2023 AGM. Their initial three-year term of appointment will end at the conclusion of the 2026 AGM, subject to annual re-election by shareholders' at the relevant AGMs.*

Our approach to workforce remuneration

Remuneration alignment with executive Directors

Total compensation, which comprises fixed and variable pay, is the key focus of our remuneration framework, with variable pay differentiated by performance and demonstration of value-aligned behaviours. We set out below the key features and design characteristics of our remuneration framework, which will apply on a Group-wide basis, subject to compliance with local laws:

Overview of remuneration structure for employees

Remuneration components and objectives	Application for Group employees	Approach for executive Directors
Fixed pay Attract and retain employees with market competitive pay for the role, skills and experience required.	• Fixed pay may include salary, fixed pay allowance, cash in lieu of pension and other cash allowances in accordance with local market practice. • It is based on predetermined criteria, non-discretionary, transparent and not reduced based on performance. • It represents a higher proportion of total compensation for more junior employees. • Fixed pay may change to reflect an individual's position, role or grade, cost of living in the country, individual skills, capabilities and experience. • Fixed pay is generally delivered in cash on a monthly basis.	• Consistent with approach for Group colleagues except fixed pay allowance paid in shares.
Benefits Support the physical, mental and financial health of a diverse workforce in accordance with local market practice.	• Benefits may include, but are not limited to, the provision of a pension, medical insurance, life insurance, health assessment and relocation support.	• Provision of medical insurance, life insurance, car and tax return assistance. Group Chief Executive is eligible to receive accommodation and a car benefit in Hong Kong.
Annual incentive Incentivise and reward performance based on annual financial and non-financial measures consistent with the medium- to long-term strategy, stakeholder interests and values-aligned behaviours.	• All employees are eligible to be considered for a discretionary variable pay award. Individual awards are determined against objectives for performance set at the start of the year. • Annual incentives represent a higher proportion of total compensation for more senior employees and will be more closely aligned to Group and business performance as seniority increases. • Variable pay for Group employees identified as Material Risk Takers ('MRTs') under European Union Regulatory Technical Standard ('RTS') 2021/923 is limited to 200% of fixed pay, as approved by shareholders at the 2014 AGM held on 23 May 2014 (98% in favour). • Awards are generally paid in cash and shares. For MRTs, at least 50% of the awards are in shares and/or where required by regulations, in units linked to asset management funds.	• Annual incentive is determined based on the outcomes of annual scorecard of financial and non-financial measures. • Executive Directors and Group Executives are also eligible to be considered for a long-term incentive award, which is subject to three-year forward-looking performance measures.

Overview of remuneration structure for employees (continued)

Remuneration components and objectives	Application for Group employees	Approach for executive Directors
Buy-out awards Support recruitment of key individuals.	• Buy-out awards may be offered if an individual holds any outstanding unvested awards that are forfeited on resignation from the previous employer. • The terms of the buy-out awards will not be more generous than the terms attached to the awards forfeited on cessation of employment with the previous employer.	• For new hires, the approach is consistent with the approach taken for employees and policy approved by shareholders.
Target variable remuneration Support recruitment of key individuals.	• Target variable pay is an indicative value, which is awarded in exceptional circumstances for new hires, and is limited to the individual's first year of employment only, and is subject to a number of factors (such as the respective performance of the Group, business unit and individual), and the final value paid remains at the full discretion of HSBC. • The exceptional circumstances would typically involve a critical new hire and would also depend on the factors such as the seniority of the individual, where the new hire candidate is forfeiting any awards and the timing of the hire during the performance year.	• For new hires, the approach is consistent with the approach taken for employees and policy approved by shareholders.
Deferral Align employee interests with the medium- to long-term strategy, stakeholder interests and values-aligned behaviours.	• A Group-wide deferral approach is applicable to all employees. A portion of annual incentive awards above a specified threshold is deferred in shares vesting annually over a three-year period (33% vesting on the first and second anniversaries of grant and 34% on the third). • For MRTs, awards are generally subject to a minimum 40% deferral (60% for awards of £500,000 or more) over a minimum period of four years. • A deferral period of five years is applied for senior management and individuals in specified roles with managerial responsibilities as prescribed under the PRA and FCA remuneration rules and seven years for individuals in PRA-designated senior management functions. • In line with the PRA and FCA remuneration rules, and in compliance with local regulations, the deferral requirement for MRTs is not applied to individuals where their total variable pay is £44,000 or less and variable pay is not more than one-third of total compensation. For these individuals, the Group standard deferral applies. • Individuals based outside the UK and identified as MRTs under local regulations, would be subject to local requirements where necessary. • All deferred awards are subject to malus provisions, subject to compliance with local laws. Awards granted to MRTs on or after 1 January 2015 and awards granted to non-MRTs on or after 1 January 2022 are subject to clawback. • HSBC operates an anti-hedging policy for all employees, which prohibits employees from entering into any personal hedging strategies in respect of HSBC securities. • For all Group MRTs and the majority of local MRTs, excluding executive Directors, a minimum 50% of the deferred awards is in HSBC shares and the rest into deferred cash. Local regulatory requirements would also apply where necessary. • For some employees in our asset management business, where required by the relevant regulations, at least 50% of the deferred award is linked to fund units reflective of funds managed by those entities, with the remaining portion in deferred cash awards. • Variable pay awards made in HSBC shares or linked to relevant fund units granted to MRTs are generally subject to a one-year retention period post-vesting. • MRTs who are subject to a five-year deferral period, except senior management or individuals in PRA- and FCA-designated senior management functions, have a six-month retention period applied to their awards. • Where an employee is subject to more than one regulation, the requirement specific to the sector and/or country in which the individual is working is applied.	• All of the LTI award, or at least 60% of the total variable award (including LTI), is deferred. The deferred awards will vest in five equal annual instalments, with the first vesting on or around the third anniversary of the grant date and the last instalment vesting on or around the seventh anniversary of the grant date. • All deferred awards are in HSBC shares and subject to a post-vesting retention period of one year.
Severance payments Adhere to contractual agreements with involuntary leavers.	• Where an individual's employment is terminated involuntarily for gross misconduct then, subject to compliance with local laws, the Group's policy is not to make any severance payment in such cases and all outstanding unvested awards are forfeited. • For other cases of involuntary termination of employment, the determination of any severance will take into consideration the performance of the individual, contractual notice period, applicable local laws and circumstances of the case. • Generally, all outstanding unvested awards will normally continue to vest in line with the applicable vesting dates. Where relevant, any performance conditions attached to the awards, and malus and clawback provisions, will remain applicable to those awards. • Severance amounts awarded to MRTs are not considered as variable pay for the purpose of application of the deferral and variable pay cap rules under the PRA and FCA remuneration rules where such amounts include: (i) payments of fixed remuneration that would have been payable during the notice and/or consultation period; (ii) statutory severance payments; (iii) payments determined in accordance with any approach applicable in the relevant jurisdictions; and (iv) payments made to settle a potential or actual dispute.	• Any payments will be in line with the policy on loss of office

Link between risk, performance and reward

Our remuneration practices promote sound and effective risk management while supporting our business objectives and the delivery of our strategy.

We set out below the key features of our framework, which help enable us to achieve alignment between risk, performance and reward, subject to compliance with local laws and regulations:

Framework elements	Application
Variable pay pool	The Group variable pay pool is expected to reflect Group performance, based on a range of financial, non-financial and contextual factors. We use a countercyclical funding methodology, with both a floor and a ceiling, with the payout ratio generally reducing as performance increases to avoid pro-cyclicality. The floor recognises that even in challenging times, remaining competitive is important. The ceiling recognises that at higher levels of performance it is not always necessary to continue to increase the variable pay pool, thereby limiting the risk of inappropriate behaviour to drive financial performance. The main quantitative and qualitative performance and risk metrics used for assessment of performance include: • Group and business unit financial performance, taking into account contextual factors driving performance, and capital requirements; • current and future risks, taking into consideration performance against the risk appetite, financial and resourcing plan and global conduct outcomes; and • fines, penalties and provisions for customer redress, which are automatically included in the Committee's definition of profit for determining the pool. In the event that the Group was unable to distribute dividends to shareholders for reasons such as capital adequacy, then the Group may determine that as a year of weak performance. In such a year, the Group may withhold some, or all, variable pay for employees including unvested share awards, using the metrics outlined above as a basis for that determination.
Individual performance scorecard	• Assessment of individual performance is made with reference to clear and relevant financial and non-financial objectives. Objectives for senior management take into account appropriate measures linked to sustainability risks, such as: reduction in carbon footprint; facilitating financing to help clients with their transition to net zero; employee diversity targets; and risk and compliance measures. A mandatory global risk objective is included in the scorecard of all other employees. All employees receive a behaviour rating as well as a performance rating, which ensures performance is assessed not only on what is achieved but also on how it is achieved.
Control function staff	• The performance and reward of individuals in control functions, including risk and compliance employees, are assessed according to a balanced scorecard of objectives specific to the functional role they undertake. • Their remuneration is determined independent of the performance of the business areas they oversee. • The Committee is responsible for approving the remuneration for the Group Chief Risk and Compliance Officer and Group Head of Internal Audit. • Group policy is for control functions staff to report into their respective function. Remuneration decisions for senior functional roles are made by the global function head. • Remuneration is carefully benchmarked with the market and internally to ensure it is set at an appropriate level.
Variable pay adjustments and conduct recognition	• Variable pay awards may be adjusted downwards in circumstances including: – detrimental conduct, including conduct that brings HSBC into disrepute; – involvement in events resulting in significant operational losses, or events that have caused or have the potential to cause significant harm to HSBC; and – non-compliance with the values-aligned behaviours and other mandatory requirements or policies. • Rewarding positive conduct may take the form of use of our global recognition programme, At Our Best, or positive adjustments to variable pay awards.
Malus	Malus can be applied to unvested deferred awards (up to 100% of awards) granted in prior years in circumstances including: • detrimental conduct, including conduct that brings the business into disrepute; • past performance being materially worse than originally reported; • restatement, correction or amendment of any financial statements; and • improper or inadequate risk management.
Clawback	Clawback can be applied to vested or paid awards granted to MRTs on or after 1 January 2015 (and awards granted to non-MRTs on or after 1 January 2022) for a period of seven years, extended to 10 years for employees in PRA and FCA designated senior management functions in the event of ongoing internal/regulatory investigation at the end of the seven-year period. Clawback may be applied in circumstances including: • participation in, or responsibility for, conduct that results in significant losses; • failing to meet appropriate standards and propriety; • reasonable evidence of misconduct or material error that would justify, or would have justified, summary termination of a contract of employment; and • a material failure of risk management suffered by HSBC or a business unit in the context of Group risk-management standards, policies and procedures.
Sales incentives	• We generally do not operate commission-based sales plans, unless aligned with local market practice and with appropriate safeguards to avoid incentivising inappropriate sales behaviours.
Identification of MRTs	• We identify individuals as MRTs based on the qualitative and quantitative criteria set out in the RTS and using the following key principles that underpin HSBC's identification process: – MRTs are identified at Group, HSBC Bank (consolidated) and HSBC UK Bank level. – MRTs are also identified at other solo regulated entity level as required by the regulations. – When identifying an MRT, HSBC considers an employee's role within its matrix management structure. The global business and function that an individual works within takes precedence, followed by the geographical location in which they work. • We also identify additional MRTs based on our own internal criteria, which include compensation thresholds and individuals in certain roles and grades who otherwise would not be identified as MRTs under the criteria prescribed in the RTS.

Pay ratio

The following table shows the ratio between the total pay of the Group Chief Executive and the lower quartile, median and upper quartile pay of our UK employees.

Total pay ratio

	Method	Lower quartile	Median	Upper quartile
2022	A	167:1	95:1	49:1
2021	A	154:1	90:1	46:1
2020	A	139:1	85:1	43:1
2019	A	169:1	105:1	52:1

Total pay and benefits amounts used to calculate the ratio

		Lower quartile		Median		Upper quartile	
(£)	Method	Total pay and benefits	Total salary	Total pay and benefits	Total salary	Total pay and benefits	Total salary
2022	A	33,284	24,615	58,257	41,000	113,778	95,000
2021	A	31,727	27,666	54,678	41,500	106,951	84,000
2020	A	29,833	23,264	48,703	36,972	96,386	75,000
2019	A	28,920	24,235	46,593	41,905	93,365	72,840

The increase in median ratio is primarily driven by a higher annual incentive payout than in 2021 to the Group Chief Executive, reflecting the improvement in the financial performance of the Group. This is described further in the Committee Chair's letter.

The total pay and benefits for the median employee for 2022 was £58,257, a 6.5% increase compared with 2021.

Our UK workforce comprises a diverse mix of employees across different businesses and levels of seniority, from junior cashiers in our retail branches to senior executives managing our global business units. We aim to deliver market-competitive pay for each role, taking into consideration the skills and experience required for the business.

Pay structure varies across roles in order to deliver an appropriate mix of fixed and variable pay. Junior employees have a greater portion of their pay delivered in a fixed component, which does not vary with performance and allows them to predictably meet their day-to-day needs. Our senior management, including executive Directors, generally have a higher portion of their total compensation opportunity structured as variable pay and linked to the performance of the Group, given their role and ability to influence the strategy and performance of the Group. Executive Directors also have a higher proportion of their variable pay delivered in shares, which vest over a period of seven years with a post-vesting retention period of one year. During this deferral and retention period, the awards are linked to the share price so the value of award realised by them after the vesting and retention period will be aligned to the performance of the Group.

We are satisfied that the median pay ratio is consistent with the pay, reward and progression policies for our UK workforce, taking into account the diverse mix of our UK employees, the compensation structure mix applicable to each role and our objective of delivering market competitive pay for each role subject to Group, business and individual performance.

Our ratios have been calculated using the option 'A' methodology prescribed under the UK Companies (Miscellaneous Reporting) Regulations 2018. Under this option, the ratios are calculated using full-time equivalent pay and benefits of all employees providing services in the UK at 31 December 2022. We believe this approach provides accurate information and representation of the ratios. The ratio has been computed taking into account the pay and benefits of nearly 35,000 UK employees, other than the individual performing the role of Group Chief Executive. We calculated our pay quartiles and benefits information for our UK employees using:

- full-time equivalent annualised fixed pay, which includes salary and allowances, at 31 December 2022;
- variable pay awards for 2022;
- return on deferred cash awards granted in prior years. The deferred cash portion of the annual incentive granted in prior years includes a right to receive notional returns for the period between the grant date and vesting date, which is determined by reference to a rate of return specified at the time of grant. A payment of notional return is made annually and the amount is disclosed on a paid basis in the year in which the payment is made;
- gains realised from exercising awards from taxable employee share plans; and
- full-time equivalent value of taxable benefits and pension contributions.

Full-time equivalent fixed pay and benefits for each employee have been calculated by using each employee's data as at 31 December 2022. Where an employee works part-time, fixed pay and benefits are grossed up, where appropriate, to full-time equivalent. One-off benefits have not been included in calculating the ratios as these are not permanent in nature and in some cases, depending on individual circumstances, may not truly reflect a benefit to the employee.

Total pay and benefits for the Group Chief Executive is the single figure of remuneration table for Noel Quinn. Total remuneration does not include an LTI as he has not received an LTI award with a performance period that ended during 2022. In a year in which the value of an LTI is included in the single figure table of remuneration, the ratios could be higher.

Given differences in business mix and size; employment and compensation practices; methodologies for computing pay ratios; and assumptions used by companies, the reported ratios may not be comparable to our international and listed peers on the FTSE 100.

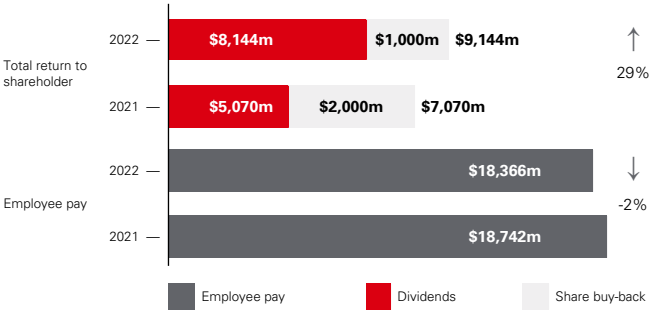
Relative importance of spend on pay

The following chart shows the change in:

- total staff pay between 2021 and 2022; and
- dividends and share buy-backs in respect of 2021 and 2022.

In 2022, total spend on pay was slightly lower than in 2021, while the distribution to shareholders increased by 29% compared with 2021, reflecting a higher dividend and the capital return to shareholders through the $1bn share buy-back announced in February 2022, which concluded in 2022. Dividends include an approximation of the amount payable in April 2023 in relation to the second interim dividend of $0.23 per ordinary share.

Relative importance of spend on pay



Comparison of Directors' and employees' pay

The following table compares the changes in each Director's salary, taxable benefits and annual incentive between 2020 and 2022 with the percentage change in each of those elements of pay for UK-based employees of HSBC Group Management Services Limited, the employing entity of the executive Directors.

There were no changes to the fees or benefits of the non-executive Directors between 2022 and 2020. The year-on-year percentage change in fees noted in the table below is primarily driven by any pro-rated fees received by the non-executive Director for 2022 and/or 2021 and/or 2020 based on time served by them on the Board and the relevant Board committees and any additional responsibilities taken on by the non-executive Director during each year. The value of benefits received by the non-executive Directors reflect the taxable expense reimbursements claimed, and the associated gross-up tax, in relation to attending the Board meetings in each year. Non-executive Directors who joined after 1 January 2022 are not included, which includes Geraldine Buckingham who joined on 1 May 2022.

Annual percentage change in remuneration

	2020			2021			2022		
Director/employees	Base salary/fees	Benefits	Annual incentive	Base salary/fees	Benefits	Annual incentive[1]	Base salary/fees	Benefits	Annual incentive
Executive Directors									
Noel Quinn[2]	151.7%	353.7%	20.2%	1.7%	-48.9%	99.0%	3.2%	25.3%	36.1%
Ewen Stevenson (retired on 31 December 2022)	2.6%	-25.0%	-58.4%	1.8%	-75.0%	117.3%	3.2%	133.3%	11.6%
Non-executive Directors[3]									
Kathleen Casey (retired on 24 April 2020)	-65.0%	200.0%	–	–	–	–	–	–	–
Laura Cha (retired on 28 May 2021)[4]	97.0%	–	–	-58.8%	–	–	–	–	–
Henri de Castries (retired on 28 May 2021)[4,5]	4.1%	-75.0%	–	-59.4%	2,100.0%	–	–	–	–
Rachel Duan[6]	–	–	–	–	–	–	235.8%	–	–
Dame Carolyn Fairbairn[7]	–	–	–	–	–	–	231.1%	–	–
James Forese[8]	–	–	–	257.5%	–	–	20.5%	–	–
Steven Guggenheimer[9]	–	–	–	86.6%	–	–	4.8%	–	–
Irene Lee (retired on 29 April 2022)	20.3%	-100.0%	–	1.8%	–	–	-12.2%	–	–
José Antonio Meade Kuribreña[10]	28.7%	100.0%	–	10.4%	-100.0%	–	8.5%	–	–
Pauline van der Meer Mohr (retired on 29 April 2022)[10]	17.7%	-75.0%	–	-6.7%	-100.0%	–	-68.4%	–	–
Heidi Miller (retired on 28 May 2021)[4,5]	1.1%	-100.0%	–	-60.3%	171.4%	–	–	–	–
Eileen Murray[7]	–	–	–	121.7%	–	–	-1.5%	–	–
David Nish	108.7%	-50.0%	–	0.4%	25.0%	–	-1.0%	120.0%	–
Sir Jonathan Symonds (retired on 18 February 2020)	-86.5%	-4.8%	–	–	–	–	–	–	–
Jackson Tai[10]	-10.8%	-78.9%	–	-1.4%	-100.0%	–	7.7%	–	–
Mark Tucker	–	-77.5%	–	–	-36.5%	–	–	242.4%	–
Employee group[11]	**2.0%**	**2.3%**	**-20.0%**	**1.0%**	**1.3%**	**25.2%**	**3.1%**	**7.0%**	**3.7%**

1 *Noel Quinn and Ewen Stevenson both voluntarily waived the cash portion of their 2020 annual incentive. The year-on-year percentage change between 2020 and 2021 would be -1% for Noel Quinn and 9% for Ewen Stevenson without this cash waiver.*
2 *Noel Quinn succeeded John Flint as interim Group Chief Executive with effect from 5 August 2019 and was appointed permanently into the role on 17 March 2020. The annual percentage change in 2020 for Noel Quinn is based on remuneration reported in his 2019 single figure of remuneration (for the period 5 August 2019 to 31 December 2019) and his 2020 single figure of remuneration (for the period 1 January 2020 to 31 December 2020). Based on his annualised 2019 compensation as an executive Director, his percentage change in salary, benefits and annual incentive was 2.1%, 85.2% and -50.9%, respectively for 2020.*
3 *In some instances, non-executive Directors may have served only part of the year resulting in large year-on-year percentage changes in fees and/or benefits. Page 291 provides the underlying single figure of remuneration for non-executive Directors used to calculate the figures above.*
4 *Retired from the Board during 2021 and therefore fees received during 2021 were lower than the fees received in 2020.*
5 *There was no change to the benefit provided. The year-on-year change reflected the increase in taxable expense reimbursement claimed in 2021 for attending Board and other meetings at HSBC Holdings' registered offices.*
6 *Appointed as member of the Group Audit Committee on 1 June 2022.*
7 *Appointed as Chair of the Group Remuneration Committee effective 29 April 2022.*
8 *Appointed as non-executive Chair of HSBC North America Holdings, Inc in 2021. Fees for 2021 included fees in relation to this role.*
9 *Joined the Board during 2020 and therefore received fees for only part of 2020.*
10 *Received no taxable benefits in 2021, resulting in a 100% reduction from 2021.*
11 *Employee group consists of individuals employed by HSBC Group Management Services Ltd, the employing entity of the executive Directors, as no individuals are employed directly by HSBC Holdings.*

Policy alignment with UK Corporate Governance Code

The table below details how the Group Remuneration Committee addresses the principles set out in the UK Corporate Governance Code in respect of the Directors' remuneration policy:

Provision	Approach
Clarity Remuneration arrangements should be transparent and promote effective engagement with shareholders and the workforce.	• The Committee regularly engages and consults with key shareholders to take into account shareholder feedback and to ensure there is transparency on our policy and its implementation. • Details of our remuneration practices and our remuneration policy for Directors are published and available to all our employees.
Simplicity Remuneration structures should avoid complexity and their rationale and operation should be easy to understand.	• Our Directors' remuneration policy has been designed so that it is easy to understand and transparent, while complying with the provisions set out in the UK Corporate Governance Code and the remuneration rules of the UK's PRA and FCA, as well as meeting the expectations of our shareholders. The objective of each remuneration element is explained and the amount paid in respect of each element of pay is clearly set out.
Risk Remuneration structures should identify and mitigate against reputational and other risks from excessive rewards, as well as behavioural risks that can arise from target-based incentive plans.	• In line with regulatory requirements, our remuneration practices promote sound and effective risk management while supporting our business objectives. • The Group Chief Risk and Compliance Officer attends Committee meetings and updates the Committee on the overall risk profile of the Group. The Committee also seeks inputs from the Group Risk Committee when making remuneration decisions. • Risk and conduct considerations are taken into account in setting the variable pay pool, from which any executive Director variable pay is funded. • Executive Directors' annual incentive and LTI scorecards include a mix of financial and non-financial measures. Financial measures in the scorecards are subject to a CET1 capital underpin to ensure CET1 capital remains within risk tolerance levels while achieving financial targets. In addition, the overall scorecard outcome is subject to a risk and compliance modifier. • The deferred portion of any awards granted to executive Directors is subject to a seven-year deferral period during which our malus policy can be applied. All variable pay awards that have vested are subject to our clawback policy for a period of up to seven years from the award date (extending to 10 years where an investigation is ongoing).
Predictability The range of possible values of rewards to individual Directors and any other limits or discretions should be identified and explained at the time of approving the policy.	• The charts set out in our shareholder approved policy report (available in our *Annual Report and Accounts 2021*) show how the total value of remuneration and its composition vary under different performance scenarios for executive Directors.
Proportionality The link between individual awards, the delivery of strategy and the long-term performance of the Group should be clear and outcomes should not reward poor performance.	• The annual incentive and LTI scorecards reward achievement of our financial and resource plan targets, as well as long-term financial and shareholder value creation targets. • The Committee retains the discretion to adjust the annual incentive and LTI payout based on the outcome of the relevant scorecards, if it considers that the payout determined does not appropriately reflect the overall position and performance of the Group during the performance period.
Alignment with culture Incentive schemes should drive behaviours consistent with the Group's purpose, values and strategy.	• In order for any annual incentive award to be made, each executive Director must achieve a required behaviour rating, which is assessed by reference to the HSBC Values. • Annual incentive and LTI scorecards contain non-financial measures linked to our wider social obligations. These include measures related to reducing the environmental impact of our operations, improving customer satisfaction, diversity and employee engagement. • Each year senior employees participate in a 360 degree survey, which gathers feedback on values-aligned behaviours from peers, direct reports, skip level reports and managers.

Additional regulatory remuneration disclosures

This section provides disclosures required under the Hong Kong Ordinances, Hong Kong Listing Rules and the Pillar 3 remuneration disclosures.

For the purpose of the Pillar 3 remuneration disclosures, executive Directors and non-executive Directors are considered to be members of the management body. Members of the Group Executive Committee other than the executive Directors are considered as senior management.

MRT remuneration disclosures

The following tables set out the remuneration disclosures for individuals identified as MRTs for HSBC Holdings.

Remuneration information for individuals who are only identified as MRTs at HSBC Bank plc, HSBC UK Bank plc or other solo-regulated entity levels is included, where relevant, in those entities' disclosures.

The 2022 variable pay information included in the following tables is based on the market value of awards. For share awards, the market value is based on HSBC Holdings' share price at the date of grant (unless indicated otherwise). For cash awards, it is the value of awards expected to be paid to the individual over the deferral period.

Remuneration awarded for the financial year (REM1)

		Supervisory function	Management function	Other senior management	Other identified staff
Fixed remuneration	Number of identified staff	12.0	2.0	18.9	1,203.1
	Total fixed pay ($m)	6.4	6.3	43.6	656.8
	of which: cash-based ($m)[1]	*6.4*	*2.9*	*43.6*	*656.8*
	of which: shares or equivalent ownership interests ($m)[2]	—	*3.4*	—	—
	of which: share-linked instruments or equivalent non-cash instruments ($m)	—	—	—	—
	of which: other instruments ($m)	—	—	—	—
	of which: other forms ($m)	—	—	—	—
Variable remuneration[3]	Number of identified staff	12.0	2.0	18.9	1,203.1
	Total variable remuneration ($m)[4,5]	—	11.0	65.4	641.0
	of which: cash-based ($m)	—	*1.6*	*30.0*	*321.0*
	– of which: deferred ($m)	—	—	*17.9*	*151.9*
	of which: shares or equivalent ownership interests ($m)[2]	—	*9.4*	*35.4*	*305.9*
	– of which: deferred ($m)	—	*7.8*	*23.3*	*170.0*
	of which: share-linked instruments or equivalent non-cash instruments ($m)	—	—	—	*8.7*
	– of which: deferred ($m)	—	—	—	*4.7*
	of which: other instruments ($m)	—	—	—	—
	– of which: deferred ($m)	—	—	—	—
	of which: other forms ($m)	—	—	—	*5.4*
	– of which: deferred ($m)	—	—	—	*3.3*
Total remuneration ($m)		6.4	17.3	109.0	1,297.8

1 *Cash-based fixed remuneration is paid immediately.*
2 *Paid in HSBC shares. Vested shares are subject to a retention period of up to one year.*
3 *Variable pay awarded in respect of 2022. In accordance with shareholder approval received on 23 May 2014 (98% in favour), for each MRT the variable component of remuneration for any one year is limited to 200% of fixed component of the total remuneration.*
4 *The Group has used the discount rate under PRA remuneration rule 15.13 for 7 individuals for the purpose of calculating the ratio between fixed and variable components of 2022 total remuneration.*
5 *27 identified staff members were exempt from the application of the remuneration structure requirements for MRTs under the PRA and FCA remuneration rules. Their total remuneration is $6.2m, of which $5.1m is fixed pay and $1.1m is variable remuneration.*

Special payments to staff whose professional activities have a material impact on institutions' risk profile (REM2)

	Supervisory function	Management function	Other senior management	Other identified staff
Guaranteed variable remuneration awards[1]				
Number of identified staff	—	—	—	—
Total amount ($m)	—	—	—	—
– of which guaranteed variable remuneration awards paid during the financial year, that are not taken into account in the bonus cap ($m)	—	—	—	—
Severance payments awarded in previous periods, that have been paid out during the financial year[2]				
Number of identified staff	—	—	—	—
Total amount ($m)	—	—	—	—
Severance payments awarded during the financial year[2]				
Number of identified staff	—	—	—	59.8
Total amount ($m)	—	—	—	26.9
– of which paid during the financial year ($m)	—	—	—	*21.1*
– of which deferred ($m)	—	—	—	—
– of which severance payments paid during the financial year, that are not taken into account in the bonus cap ($m)	—	—	—	*26.9*
– of which highest payment that has been awarded to a single person ($m)	—	—	—	*2.2*

1 *No guaranteed variable remuneration was awarded in 2022. HSBC would offer a guaranteed variable remuneration award in exceptional circumstances for new hires, and for the first year of employment only. It would typically involve a critical new hire, and would also depend on factors such as the seniority of the individual, whether the new hire candidate has any competing offers and the timing of the hire during the performance year.*
2 *Includes payments such as payment in lieu of notice, statutory severance, outplacement service, legal fees, ex-gratia payments and settlements (excludes pre-existing benefit entitlements triggered on terminations).*

Deferred remuneration at 31 December[1] (REM3)

$m	Total amount of deferred remuneration awarded for previous performance periods	*of which: due to vest in the financial year*	*of which: vesting in subsequent financial years*	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in the financial year	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in future performance years	Total amount of adjustment during the financial year due to ex post implicit adjustments	Total amount of deferred remuneration awarded before the financial year actually paid out in the financial year	Total amount of deferred remuneration awarded for previous performance period that has vested but is subject to retention periods
Supervisory function	—	—	—	—	—	—	—	—
Cash-based	—	—	—	—	—	—	—	—
Shares	—	—	—	—	—	—	—	—
Share-linked instruments	—	—	—	—	—	—	—	—
Other instruments	—	—	—	—	—	—	—	—
Other forms	—	—	—	—	—	—	—	—
Management function	**31.1**	***2.6***	***28.5***	**-2.4**	—	**1.9**	**2.7**	**1.0**
Cash-based	**2.9**	***0.5***	***2.4***	—	—	—	**0.5**	—
Shares	**28.2**	***2.1***	***26.1***	**-2.4**	—	**1.9**	**2.2**	**1.0**
Share-linked instruments	—	—	—	—	—	—	—	—
Other instruments	—	—	—	—	—	—	—	—
Other forms	—	—	—	—	—	—	—	—
Other senior management	**114.3**	***15.7***	***98.6***	—	—	**3.0**	**16.0**	**3.0**
Cash-based	**43.3**	***6.4***	***36.9***	—	—	—	**6.5**	—
Shares	**70.0**	***8.5***	***61.5***	—	—	**2.9**	**8.7**	**2.7**
Share-linked instruments	**1.0**	***0.8***	***0.2***	—	—	**0.1**	**0.8**	**0.3**
Other instruments	—	—	—	—	—	—	—	—
Other forms	—	—	—	—	—	—	—	—
Other identified staff	**853.1**	***232.5***	***620.6***	—	—	**21.6**	**235.4**	**38.1**
Cash-based	**359.1**	***85.2***	***273.9***	—	—	—	**86.0**	—
Shares	**474.2**	***139.0***	***335.2***	—	—	**21.6**	**142.1**	**34.9**
Share-linked instruments	**13.9**	***5.4***	***8.5***	—	—	**0.7**	**5.5**	**2.4**
Other instruments	—	—	—	—	—	—	—	—
Other forms	**5.9**	***2.9***	***3.0***	—	—	**-0.7**	**1.8**	**0.8**
Total amount	**998.5**	***250.8***	***747.7***	**-2.4**	—	**26.5**	**254.1**	**42.1**

1 *This table provides details of balances and movements during performance year 2022. For details of variable pay awards granted for 2022, refer to the 'Remuneration awarded for the financial year' table. Deferred remuneration is made in cash and/or shares. Share-based awards are made in HSBC shares.*

Identified staff - remuneration by band[1] (REM4)

	Identified staff that are high earners as set out in Article 450(i) CRR
€1,000,000 – 1,500,000	**246**
€1,500,000 – 2,000,000	**107**
€2,000,000 – 2,500,000	**48**
€2,500,000 – 3,000,000	**26**
€3,000,000 – 3,500,000	**12**
€3,500,000 – 4,000,000	**8**
€4,000,000 – 4,500,000	**7**
€4,500,000 – 5,000,000	**5**
€5,000,000 – 6,000,000	**6**
€6,000,000 – 7,000,000	**2**
€7,000,000 – 8,000,000	**3**
€8,000,000 – 9,000,000	**1**
€9,000,000 – 10,000,000	**1**
€10,000,000 – 11,000,000	—
€11,000,000 – 12,000,000	**1**

1 *Table prepared in euros in accordance with Article 450 of the European Union Capital Requirements Regulation, using the exchange rates published by the European Commission for financial programming and budget for December of the reported year as published on its website.*

Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (REM5)

	Management body			Business areas						
	Supervisory function	Management function	Total	Investment banking	Retail banking	Asset management	Corporate function	Independent internal control function	All other	Total
Total number of identified staff										**1,236.0**
– of which members of the Board	*12.0*	*2.0*	*14.0*							
– of which senior management				*2.0*	*2.0*	*—*	*6.9*	*2.0*	*6.0*	
– of which other identified staff				*548.5*	*228.0*	*32.0*	*151.0*	*172.0*	*71.6*	
Total remuneration of identified staff ($m)	**6.4**	**17.3**	**23.7**	**704.8**	**225.2**	**40.5**	**189.0**	**123.8**	**123.5**	
– of which variable remuneration ($m)[1]	*—*	*11.0*	*11.0*	*368.6*	*107.6*	*21.0*	*92.4*	*53.9*	*62.9*	
– of which fixed remuneration ($m)	*6.4*	*6.3*	*12.7*	*336.2*	*117.6*	*19.5*	*96.6*	*69.9*	*60.6*	

1 *Variable pay awarded in respect of 2022. In accordance with shareholder approval received on 23 May 2014 (98% in favour), for each MRT the variable component of remuneration for any one year is limited to 200% of fixed component of the total remuneration.*

Directors' emoluments

The details of compensation paid to executive and non-executive Directors for the year ended 31 December 2022 are set out below:

Emoluments

	Noel Quinn		Ewen Stevenson		Non-executive Directors[1]	
	2022 £000	2021 £000	**2022 £000**	2021 £000	**2022 £000**	2021 £000
Directors' base salary, allowances and benefits in kind	**3,367**	3,283	**1,994**	1,933		
Non-executive Directors' fees and benefits in kind					**5,242**	4,680
Pension contributions	**—**	—	**—**	—	**—**	—
Performance-related pay paid or receivable[2]	**6,439**	5,721	**1,091**	3,388	**—**	—
Inducements to join paid or receivable	**—**	—	**1,180**	754	**—**	—
Compensation for loss of office	**—**	—	**—**	—	**—**	—
Notional return on deferred cash	**31**	22	**—**	—	**—**	—
Total	**9,837**	9,026	**4,265**	6,075	**5,242**	4,680
Total ($000)	**12,113**	12,414	**5,252**	8,356	**6,455**	5,763

1 *Fees and benefits in kind for 2021 reflects the population as per the single figure table for non-executive Directors, which excludes individuals who have stepped down from the Board during 2021.*
2 *Includes the value of the deferred and LTI awards at grant.*

The aggregate amount of Directors' emoluments (including both executive Directors and non-executive Directors) for the year ended 31 December 2022 was $23,820,419. As per our policy, benefits in kind may include, but are not limited to, the provision of medical insurance, income protection insurance, health assessment, life assurance, club membership, tax assistance, car benefit, travel assistance, provision of company owned-accommodation and relocation costs (including any tax due on these benefits, where applicable). Post-employment medical insurance benefit was provided to former Directors, including Douglas Flint valued at £6,706 ($8,258), Stuart Gulliver valued at £6,706 ($8,258), John Flint valued at £9,996 ($12,309), and Marc Moses valued at £15,851 ($19,519). Tax return support was also provided to John Flint valued at £5,441 ($6,700), and Marc Moses valued at £2,500 ($3,079). The total aggregate value of benefits provided to former executive Directors was £47,200 ($58,123). The aggregate value of Director retirement benefits for current Directors is nil. Amounts are converted into US dollars based on the average year-to-date exchange rates for the respective year.

There were payments under retirement benefit arrangements with two former Directors of $405,660. The provision at 31 December 2022 in respect of unfunded pension obligations to former Directors amounted to $5,387,659. This relates to unfunded unapproved retirement benefits schemes.

Emoluments of senior management and five highest paid employees

The following tables set out the details of emoluments paid to senior management, which in this case comprises executive Directors and members of the Group Executive Committee, for the year ended 31 December 2022, or for the period of appointment in 2022 as a Director or member of the Group Executive Committee. Details of the remuneration paid to the five highest paid employees, comprising one executive Director and four Group Executives, for the year ended 31 December 2021, are also presented.

Emoluments

£000s	Five highest paid employees	Senior management
Basic salaries, allowances and benefits in kind	**13,404**	**41,639**
Pension contributions	**99**	**611**
Performance-related pay paid or receivable[1]	**23,237**	**56,616**
Inducements to join paid or receivable	**—**	**—**
Compensation for loss of office	**—**	**—**
Total	**36,740**	**98,866**
Total ($000)	**45,242**	**121,745**

1 *Includes the value of deferred shares awards at grant.*

Emoluments by bands

Hong Kong dollars	US dollars	Number of highest paid employees	Number of senior management
$10,500,001 – $11,000,000	$1,340,909 – $1,404,762	—	1
$19,500,001 – $20,000,000	$2,490,259 – $2,554,112	—	1
$24,000,001 – $24,500,000	$3,064,935 – $3,128,787	—	1
$25,500,001 – $26,000,000	$3,256,493 – $3,320,346	—	1
$29,500,001 – $30,000,000	$3,767,315 – $3,831,168	—	1
$39,500,001 – $40,000,000	$5,044,371 – $5,108,224	—	1
$41,000,001 – $41,500,000	$5,235,930 – $5,299,782	—	1
$44,000,001 – $44,500,000	$5,619,047 – $5,682,899	—	1
$44,500,001 – $45,000,000	$5,682,899 – $5,746,752	—	1
$45,500,001 – $46,000,000	$5,810,605 – $5,874,458	—	1
$52,500,001 – $53,000,000	$6,704,544 – $6,768,397	—	1
$53,000,001 – $53,500,000	$6,768,397 – $6,832,250	—	1
$55,500,001 – $56,000,000	$7,087,661 – $7,151,514	—	1
$56,500,001 – $57,000,000	$7,215,367 – $7,279,219	—	1
$60,500,001 – $61,000,000	$7,726,189 – $7,790,042	—	1
$61,000,001 – $61,500,000	$7,790,042 – $7,853,894	—	1
$64,000,001 – $64,500,000	$8,173,158 – $8,237,011	1	1
$69,000,001 – $69,500,000	$8,811,686 – $8,875,539	1	1
$76,000,001 – $76,500,000	$9,705,626 – $9,769,478	1	1
$82,500,001 – $83,000,000	$10,535,712 – $10,599,565	1	1
$135,000,001 – $135,500,000	$17,240,256 – $17,304,109	1	1

Share capital and other related disclosures

Share buy-back programme

On 20 April 2022, HSBC Holdings concluded a share buy-back programme of its ordinary shares of $0.50 each that had been announced in October 2021. Under this buy-back programme in 2022, a total of 191,466,093 ordinary shares were repurchased for cancellation on UK trading venues, including the London Stock Exchange, BATS, Chi-X, Turquoise and/or Aquis Exchange.

On 3 May 2022, HSBC Holdings commenced a further share buy-back programme of its ordinary shares of $0.50 each up to a maximum consideration of $1.0bn. This programme concluded on 28 July 2022, with 86,606,357 ordinary shares repurchased for cancellation on the UK trading venues and 70,066,800 ordinary shares repurchased for cancellation on The Stock Exchange of Hong Kong Limited ('HKEx').

The purpose of both buy-back programmes was to reduce HSBC's number of outstanding ordinary shares.

As at 31 December 2022, the total number of ordinary shares purchased and cancelled during the year was 348,139,250, representing a nominal value of $174,069,625 and an aggregate consideration paid by HSBC of £1,426,598,865 on the UK trading venues and HK$3,514,580,618 on the HKEx. The shares cancelled represent 1.72% of the shares in issue and 1.74% of the shares in issue, excluding treasury shares.

The table that follows outlines details of the shares purchased and cancelled on a monthly basis during 2022.

First share buy-back on UK trading venues in 2022	Number of shares purchased and cancelled	Highest price paid per share £	Lowest price paid per share £	Average price paid per share £	Aggregate price paid £
Month shares cancelled					
Jan-22	25,382,519	5.2700	4.4555	4.9784	126,363,981
Feb-22	19,064,151	5.5510	5.1530	5.3395	101,793,492
Mar-22	72,125,062	5.4040	4.4935	4.9129	354,343,000
Apr-22	74,894,361	5.4100	5.1460	5.2608	394,002,122
Total	191,466,093				976,502,595

Second share buy-back on UK trading venues in 2022	Number of shares purchased and cancelled	Highest price paid per share £	Lowest price paid per share £	Average price paid per share £	Aggregate price paid £
Month shares cancelled					
May-22	21,447,447	5.2700	4.7800	4.9911	107,047,291
Jun-22	31,082,904	5.4960	4.9780	5.2729	163,897,398
Jul-22	33,126,211	5.5530	5.0840	5.2598	174,235,941
Aug-22	949,795	5.2170	5.1230	5.1755	4,915,640
Total	86,606,357				450,096,270

Second share buy-back on HKEx in 2022	Number of shares purchased and cancelled	Highest price paid per share (HK$)	Lowest price paid per share (HK$)	Average price paid per share (HK$)	Aggregate price paid (HK$)
Month shares purchased					
May-22	**5,244,800**	**52.8500**	**46.5000**	**50.8537**	**266,717,438**
Jun-22	**31,582,400**	**52.7000**	**48.2500**	**50.8657**	**1,606,461,400**
Jul-22	**33,239,600**	**52.3000**	**47.4000**	**49.3809**	**1,641,401,780**
Total	**70,066,800**				**3,514,580,618**

Dividends

Dividends for 2022

An interim dividend of $0.09 for the 2022 half-year was paid on 29 September 2022. For further details of the dividends approved in 2022, see Note 8 on the financial statements.

On 21 February 2023, the Directors approved a second interim dividend for 2022 of $0.23 per ordinary share, making a total of $0.32 for the 2022 full-year. The second interim dividend for 2022 will be payable on 27 April 2023 in cash in US dollars, or in sterling or Hong Kong dollars at exchange rates to be determined on 17 April 2023. As the second interim dividend for 2022 was approved after 31 December 2022, it has not been included in the balance sheet of HSBC as a liability. The distributable reserves of HSBC Holdings at 31 December 2022 were $35.2bn.

A quarterly dividend of £0.01 per Series A sterling preference share was paid on 15 March, 15 June, 15 September and 15 December 2022.

Dividends for 2023

The Group intends to pay quarterly dividends during 2023.

A dividend of £0.01 per Series A sterling preference share was approved on 21 February 2023 for payment on 15 March 2023.

Share capital

Issued share capital

The nominal value of HSBC Holdings' issued share capital paid up at 31 December 2022 was $10,146,803,705 divided into 20,293,607,410 ordinary shares of $0.50 each and one non-cumulative preference share of £0.01, representing approximately 100.00% and 0.00% respectively of the nominal value of HSBC Holdings' total issued share capital paid up at 31 December 2022.

Rights, obligations and restrictions attaching to shares

The rights and obligations attaching to each class of ordinary and non-cumulative preference shares in our share capital are set out in full in our Articles of Association. The Articles of Association may be amended by special resolution of the shareholders and can be found on our website at www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities.

Ordinary shares

HSBC Holdings has one class of ordinary share, which carries no right to fixed income. There are no voting restrictions on the issued ordinary shares, all of which are fully paid. On a show of hands, each member present has the right to one vote at general meetings. On a poll, each member present or voting by proxy is entitled to one vote for every $0.50 nominal value of share capital held.

There are no specific restrictions on transfers of ordinary shares, which are governed by the general provisions of the Articles of Association and prevailing legislation.

Information on the policy adopted by the Board for paying interim dividends on the ordinary shares may be found in the 'Shareholder information' section on page 418.

Dividend waivers

HSBC Holdings' employee benefit trusts, which hold shares in HSBC Holdings in connection with the operation of its share plans, have lodged standing instructions to waive dividends on shares held by them that have not been allocated to employees. Shares held by custodians in connection with the vesting of employee share awards also lodged instructions to waive dividends. The total amount of dividends waived during 2022 was $10.7m.

Preference shares

The preference shares, which have preferential rights to income and capital, do not, in general, confer a right to attend and vote at general meetings.

There are three classes of preference shares in the share capital of HSBC Holdings: non-cumulative US dollar preference shares of $0.01 each ('dollar preference shares'); non-cumulative preference shares of £0.01 each ('sterling preference shares'); and non-cumulative preference shares of €0.01 ('euro preference shares').

The sterling preference share in issue is a Series A sterling preference share. There are no dollar preference shares or euro preference shares in issue.

Information on dividends approved for 2021 and 2022 may be found in Note 8 on the financial statements on page 359.

Further details of the rights and obligations attaching to the HSBC Holdings' issued share capital may be found in Note 32 on the financial statements.

Compliance with Hong Kong Listing Rule 13.25A(2)

HSBC Holdings has been granted a waiver from strict compliance with Rule 13.25A(2) of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong.

Under this waiver, HSBC's obligation to file a Next Day Return following the issue of new shares, pursuant to the vesting of share awards granted under its share plans to persons who are not Directors, would only be triggered where it falls within one of the circumstances set out under Rule 13.25A(3).

Share capital changes in 2022

In addition to the share buy-back programme, the following events occurred during the year in relation to the ordinary share capital of HSBC Holdings:

Scrip dividends

There were no scrip dividends issued during the year.

All-employee share plans[1]

	HSBC Holdings ordinary shares issued	Aggregate nominal value	Market value per share	
			from	to
		$	£	£
HSBC International Employee Share Purchase Plan	**234,830**	**117,415**	**4.9385**	**5.1**

1 *In respect of the HSBC Holdings Savings Related Share Option Plan (UK), no new shares were issued under this plan. All exercises were satisfied by market purchased shares. See page 309 for details of options granted, exercised and lapsed.*

HSBC share plans

	HSBC Holdings ordinary shares issued	Aggregate nominal value	Market value per share	
			from	to
		$	£	£
Vesting of awards under the HSBC Share Plan 2011	**9,991,391**	**4,995,696**	**4.789**	**5.498**

Authorities to allot and to purchase shares and pre-emption rights

At the AGM in 2022, shareholders renewed the general authority for the Directors to allot new shares up to 13,475,996,328 ordinary shares, 15,000,000 non-cumulative preference shares of £0.01 each, 15,000,000 non-cumulative preference shares of $0.01 each and 15,000,000 non-cumulative preference shares of €0.01 each. Shareholders also renewed the authority for the Directors to make market purchases of up to 2,021,399,449 ordinary shares. The Directors exercised their market purchase authority from both the 2021 and 2022 AGMs and purchased 348,139,250 ordinary shares during the year.

In addition, shareholders gave authority for the Directors to grant rights to subscribe for, or to convert any security into, no more than 4,042,798,898 ordinary shares in relation to any issue by HSBC Holdings or any member of the Group of contingent convertible securities that automatically convert into or are exchanged for ordinary shares in HSBC Holdings in prescribed circumstances. For further details on the issue of contingent convertible securities, see Note 32 on the financial statements.

Other than as disclosed in the tables above headed 'Share capital changes in 2022', the Directors did not allot any shares during 2022.

Debt securities

In 2022, HSBC Holdings issued the equivalent of $25.4bn of debt securities in the public capital markets in a range of currencies and maturities in the form of senior and subordinated securities to ensure it meets the current and proposed regulatory rules, including those relating to the availability of adequate total loss-absorbing capacity. For details of capital instruments and subordinated bail-inable debt, see Notes 29 and 32 on pages 393 and 402.

Treasury shares

In accordance with the terms of a waiver granted by the Hong Kong Stock Exchange on 19 December 2005, HSBC Holdings will comply with the applicable law and regulation in the UK in relation to the holding of any shares in treasury and with the conditions of the waiver in connection with any shares it may hold in treasury. At 31 December 2022, pursuant to Chapter 6 of the UK Companies Act 2006, 325,273,407 ordinary shares were held in treasury. This was the maximum number of shares held at any time during 2022, representing 1.60% of the shares in issue as at 31 December 2022. The nominal value of shares held in treasury was $162,636,704.

Notifiable interests in share capital

During 2022, HSBC Holdings did not receive any notification of major holdings of voting rights pursuant to the requirements of Rule 5 of the Disclosure Guidance and Transparency Rules ('Rule 5 of the DTRs').

On 13 February 2023, pursuant to Rule 5 of the DTRs, Norges Bank gave notice that on 10 February 2023 it had the following: a direct interest in HSBC Holdings ordinary shares of 598,657,162; and qualifying financial instruments with 9,249,895 voting rights that may be acquired if the instruments are exercised or converted, representing 2.998% and 0.046% respectively, of the total voting rights at that date.

No further notifications had been received between 31 December 2022 and 15 February 2023. Previous notifications received are as follows:

- BlackRock, Inc. gave notice on 3 March 2020 that on 2 March 2020 it had the following: an indirect interest in HSBC Holdings ordinary shares of 1,235,558,490; qualifying financial instruments with 7,294,459 voting rights that may be acquired if the instruments are exercised or converted; and financial instruments with a similar economic effect to qualifying financial instruments, which refer to 2,441,397 voting rights, representing 6.07%, 0.03% and 0.01%, respectively, of the total voting rights at 2 March 2020.
- Ping An Asset Management Co., Ltd. gave notice on 6 December 2017 that on 4 December 2017 it had an indirect interest in HSBC Holdings ordinary shares of 1,007,946,172, representing 5.04% of the total voting rights at that date.

At 31 December 2022, according to the register maintained by HSBC Holdings pursuant to section 336 of the Securities and Futures Ordinance of Hong Kong:

- BlackRock, Inc. gave notice on 9 March 2022 that on 4 March 2022 it had the following interests in HSBC Holdings ordinary shares: a long position of 1,701,656,169 shares and a short position of 19,262,061 shares, representing 8.27% and 0.09%, respectively, of the ordinary shares in issue at that date.
- Ping An Asset Management Co., Ltd. gave notice on 25 September 2020 that on 23 September 2020 it had a long position of 1,655,479,531 in HSBC Holdings ordinary shares, representing 8.00% of the ordinary shares in issue at that date.

Sufficiency of float

In compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, at least 25% of the total issued share capital has been held by the public at all times during 2022 and up to the date of this report.

Dealings in HSBC Holdings listed securities

The Group has policies and procedures that, except where permitted by statute and regulation, prohibit specified transactions in respect of its securities listed on The Stock Exchange of Hong Kong Limited. Except for dealings as intermediaries or as trustees by subsidiaries of HSBC Holdings, and purchases by HSBC Holdings under the share buy-back programme, neither HSBC Holdings nor any of its subsidiaries has purchased, sold or redeemed any of its securities listed on The Stock Exchange of Hong Kong Limited during the year ended 31 December 2022.

Directors' interests

Pursuant to the requirements of the UK Listing Rules and according to the register of Directors' interests maintained by HSBC Holdings pursuant to section 352 of the Securities and Futures Ordinance of Hong Kong, the Directors of HSBC Holdings at 31 December 2022 had certain interests, all beneficial unless otherwise stated, in the shares or debentures of HSBC Holdings and its associated corporations.

Save as stated in the following table, no further interests were held by Directors, and no Directors or their connected persons were awarded or exercised any right to subscribe for any shares or debentures in any HSBC corporation during the year.

No Directors held any short position as defined in the Securities and Futures Ordinance of Hong Kong in the shares or debentures of HSBC Holdings and its associated corporations.

Directors' interests – shares and debentures

		At 31 Dec 2022 or date of cessation, if earlier				
	At 1 Jan 2022, or date of appointment, if later	Beneficial owner	Child under 18 or spouse	Jointly with another person	Trustee	Total interests
HSBC Holdings ordinary shares						
Geraldine Buckingham[1] (appointed to the Board on 1 May 2022)	—	15,000	—	—	—	15,000
Rachel Duan[1]	—	15,000	—	—	—	15,000
Dame Carolyn Fairbairn	—	15,000	—	—	—	15,000
James Forese[1]	115,000	115,000	—	—	—	115,000
Steven Guggenheimer[1]	15,000	—	—	15,000	—	15,000
Irene Lee (retired on 29 Apr 2022)	15,000	15,000	—	—	—	15,000
José Antonio Meade Kuribreña[1]	15,000	15,000	—	—	—	15,000
Eileen Murray[1]	75,000	75,000	—	—	—	75,000
David Nish	50,000	—	50,000	—	—	50,000
Noel Quinn[2]	1,131,278	1,422,650	—	—	—	1,422,650
Ewen Stevenson[2]	838,154	1,064,626	—	—	—	1,064,626
Jackson Tai[1,3]	66,515	32,800	11,965	21,750	—	66,515
Mark Tucker	307,352	307,352	—	—	—	307,352
Pauline van der Meer Mohr (retired on 29 Apr 2022)	15,000	15,000	—	—	—	15,000

1 *Geraldine Buckingham has an interest in 3,000, Rachel Duan has an interest in 3,000, James Forese has an interest in 23,000, Steven Guggenheimer has an interest in 3,000, José Antonio Meade Kuribreña has an interest in 3,000, Eileen Murray has an interest in 15,000 and Jackson Tai has an interest in 13,303 listed American Depositary Shares ('ADS'), which are categorised as equity derivatives under Part XV of the Securities and Futures Ordinance of Hong Kong. Each ADS represents five HSBC Holdings ordinary shares.*

2 *Executive Directors' other interests in HSBC Holdings ordinary shares arising from the HSBC Holdings Savings-Related Share Option Plan (UK) and the HSBC Share Plan 2011 are set out in the Scheme interests in the Directors' remuneration report on page 276. At 31 December 2022, the aggregate interests under the Securities and Futures Ordinance of Hong Kong in HSBC Holdings ordinary shares, including interests arising through employee share plans and the interests above were: Noel Quinn – 3,940,314; and Ewen Stevenson – 3,135,841. Each Director's total interests represents approximately 0.02% of the shares in issue and 0.02% of the shares in issue excluding treasury shares.*

3 *Jackson Tai has a non-beneficial interest in 11,965 shares of which he is custodian.*

There have been no changes in the shares or debentures of the current Directors from 31 December 2022 to the date of this report.

Listing Rule 9.8.4 and other disclosures

This section of the *Annual Report and Accounts 2022* forms part of and includes certain disclosures required in the Report of the Directors incorporated by cross-reference, including under Listing Rule 9.8.4 and otherwise as applicable by law.

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Board governance

Appointment and re-election of Directors

A rigorous selection process is followed for the appointment of Directors. Appointments are made on merit and candidates are considered against objective criteria, having regard to the benefits of a diverse Board. Appointments are made in accordance with HSBC Holdings' Articles of Association. The Nomination & Corporate Governance Committee report sets out further details of the Board selection process.

The Board may at any time appoint any person as a Director or secretary, either to fill a vacancy or as an additional officer. The Board may appoint any Director or secretary to hold any employment or executive office, and may revoke or terminate any such appointment.

Non-executive Directors are appointed for an initial three-year term and, subject to continued satisfactory performance based upon an assessment by the Group Chairman and the Nomination & Corporate Governance Committee, are proposed for re-election by shareholders at each AGM. They typically serve two three-year terms, with any individual's appointment beyond six years to be for a rolling one-year term and subject to thorough review and challenge with reference to the needs of the Board. Where Directors are appointed beyond six years, an explanation is provided in the *Annual Report and Accounts*.

Shareholders vote at each AGM on whether to elect and re-elect individual Directors. All Directors that stood for election and re-election at the 2022 AGM were elected and re-elected by shareholders.

None of the Directors who retired during the year or who are not offering themselves for re-election at the 2023 AGM have raised concerns about the operation of the Board or the management of the company.

No executive Director is involved in deciding their own remuneration outcome.

Commitments

The terms and conditions of the appointments of non-executive Directors are set out in a letter of appointment, which includes the expectations of them and the estimated time required to perform their role. Letters of appointment of each non-executive Director are available for inspection at the registered office of HSBC Holdings. The anticipated time commitment for a non-executive Director serving on the Board and as a member of any committee is no more than 75 days per annum. Directors who also chair a large committee are expected to commit up to 100 days per annum with the Senior Independent Director expected to serve an additional 30 days per annum. The time commitment of the Group Risk Committee chair is up to 150 days per annum. Any additional time commitment connected with Board-related appointments will be confirmed separately.

Board approval is required for any non-executive Directors' external commitments, with consideration given to their total time commitments and potential conflicts of interest.

Conflicts of interest

The Board has an established policy and set of procedures, reviewed and amended in 2022, to ensure that the Board's management of Directors' conflicts of interest is effective. The Board has the power to authorise conflicts where they arise, in accordance with the Companies Act 2006 and HSBC Holdings' Articles of Association. Details of all Directors' conflicts of interest are recorded in the register of conflicts. As part of its 2022 review, the Board agreed that responsibility for the ongoing review of the conflicts register be conducted by the Board, having previously been overseen by the Nomination & Corporate Governance Committee. Upon appointment, new Directors are advised of the policy and procedures for managing conflicts. Directors are required to notify the Board of any actual or potential conflicts of interest and to update the Board with any changes to the facts and circumstances surrounding such conflicts. Directors are requested to review and confirm their own and their respective closely associated persons' outside interests and appointments twice each year. The Board has considered, and authorised (with or without conditions) where appropriate, potential conflicts as they have arisen during the year in accordance with its conflicts policy and procedures. All non-executive Directors are re-vetted by the compliance team every three years following appointment and as part of such process all conflicts checks are refreshed.

Joint Company Secretary

Aileen Taylor is the Group Company Secretary and Chief Governance Officer.

In addition to being appointed as Deputy Group Secretary in December 2021, for administrative purposes, Hannah Ashdown (46) was also appointed in October 2022 as Joint Company Secretary. She is a Fellow of the Chartered Governance Institute UK and Ireland. Hannah has over 20 years' governance and regulatory experience across multiple sectors including financial services, asset management, energy, leisure and retail.

Directors' indemnity

The Articles of Association of HSBC Holdings contain a qualifying third-party indemnity provision, which entitles Directors and other officers to be indemnified out of the assets of HSBC Holdings against claims from third parties in respect of certain liabilities.

HSBC Holdings has granted, by way of deed poll, indemnities to the Directors, including former Directors, against certain liabilities arising in connection with their position as a Director of HSBC Holdings or of any Group company. Directors are indemnified to the maximum extent permitted by law.

The indemnities that constitute a 'qualifying third-party indemnity provision', as defined by section 234 of the Companies Act 2006, remained in force for the whole of the financial year (or, in the case of Directors appointed during 2022, from the date of their appointment). The deed poll is available for inspection at the registered office of HSBC Holdings.

Additionally, Directors and pension trustees have the benefit of both Directors' and officers', and pension trustees', liability insurances.

Qualifying pension scheme indemnities have also been granted to the trustees of the Group's pension schemes, which were in force for the whole of the financial year and remain in force as at the date of this report.

Contracts of significance

During 2022, none of the Directors had a material interest, directly or indirectly, in any contract of significance with any HSBC company. During the year, all Directors were reminded of their obligations in respect of transacting in HSBC securities and following specific enquiry all Directors have confirmed that they have complied with their obligations.

Shareholder engagement and communication

The Board is directly accountable to, and gives high priority to communicating with, HSBC's shareholders. Information about HSBC and its activities is provided to shareholders in its *Interim Reports* and the *Annual Report and Accounts* as well as on www.hsbc.com.

As set out in the Section 172(1) statement on page 20, the Board seeks to understand investor needs through ongoing dialogue between members of the Board and institutional investors throughout the year. For examples of such engagement, see 'Board decision making and engagement with stakeholders' on page 20, the Board's engagement with shareholders on page 256 and the Group Remuneration Committee Chair's letter on page 276. During 2022, approximately 570 meetings were held with institutional investors and analysts globally.

Our shareholder communications policy summarises how we communicate with our shareholders, including through financial reporting, general shareholder meetings, investor and analyst meetings and our website. The policy is reviewed annually by the Board, and in 2022 the Board confirmed that it was satisfied with its implementation and effectiveness. The policy can be found at www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities.

We also publish our current and past financial results, investor presentations and shareholder information such as dividend payments and shareholder meeting details. Stock exchange announcements are also accessible on our website along with information for fixed income investors. For further details, see www.hsbc.com/investors.

Directors are encouraged to develop an understanding of the views of shareholders. Enquiries from individuals on matters relating to their shareholdings and HSBC's business are welcomed.

Any individual or institutional investor can make an enquiry by contacting the investor relations team, Group Chairman, Group Chief Executive, Group Chief Financial Officer and Group Company Secretary and Chief Governance Officer. Our Senior Independent Director is also available to shareholders if they have concerns that cannot be resolved or for which the normal channels would not be appropriate. He can be contacted via the Group Company Secretary and Chief Governance Officer at 8 Canada Square, London E14 5HQ.

Annual General Meeting

The AGM in 2023 is planned to be held in Birmingham, UK at 11:00am on Friday, 5 May 2023. Information on how to vote and participate, both in advance and on the day, can be found in the Notice of the 2023 AGM, which will be sent to shareholders on 24 March 2023 and be available on www.hsbc.com/agm. A live webcast will be available on www.hsbc.com. A recording of the proceedings will be available on www.hsbc.com shortly after the conclusion of the AGM. Shareholders should monitor our website and announcements for any changes to these arrangements. Shareholders may send enquiries to the Board in writing via the Group Company Secretary and Chief Governance Officer, HSBC Holdings plc, 8 Canada Square, London E14 5HQ or by sending an email to shareholderquestions@hsbc.com.

General meetings and resolutions

Shareholders may require the Directors to call a general meeting other than an AGM, as provided by the UK Companies Act 2006. A valid request to call a general meeting may be made by members representing at least 5% of the paid-up capital of HSBC Holdings as carries the right of voting at its general meetings (excluding any paid-up capital held as treasury shares). A request must state the general nature of the business to be dealt with at the meeting and may include the text of a resolution that may properly be moved and is intended to be moved at the meeting. At any general meeting convened on such request, no business may be transacted except that stated by the requisition or proposed by the Board.

Shareholders may request the Directors to send a resolution to shareholders for consideration at an AGM, as provided by the UK Companies Act 2006. A valid request must be made by (i) members representing at least 5% of the paid-up capital of HSBC Holdings as carries the right of voting at its general meetings (excluding any paid-up capital held as treasury shares), or (ii) at least 100 members who have a right to vote on the resolution at the AGM in question and hold shares in HSBC Holdings on which there has been paid up an average sum, per member, of at least £100.

The request must be received by HSBC Holdings not later than (i) six weeks before the AGM in question; or (ii) if later, the time at which the notice of AGM is published.

A request may be in hard copy form or in electronic form, and must be authenticated by the person or persons making it. A request may be made in writing to HSBC Holdings at its UK address, referred to in the paragraph above or by sending an email to shareholderquestions@hsbc.com.

Articles of Association

New Articles of Association were approved at the 2022 AGM. The principal changes included updates and changes to articles on hybrid meetings, general meetings, untraceable shareholders, Director share qualification, Directors' reappointment, Directors' written resolutions, distribution in specie and dividend forfeiture. The Articles of Association can be found at www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities. For further details of the 2022 Notice of AGM, see www.hsbc.com/agm.

Events after the balance sheet date

For details of events after the balance sheet date, see Note 37 on the financial statements.

Change of control

The Group is not party to any significant agreements that take effect, alter or terminate following a change of control of the Group. The Group does not have agreements with any Director or employee that would provide compensation for loss of office or employment resulting from a takeover bid.

Branches

The Group provides a wide range of banking and financial services through branches and offices in the UK and overseas.

Research and development activities

During the ordinary course of business, the Group develops new products and services within the global businesses.

Political donations

HSBC does not make any political donations or incur political expenditure within the ordinary meaning of those words. We have no intention of altering this policy. However, the definitions of political donations, political parties, political organisations and political expenditure used in the UK Companies Act 2006 are very wide. As a result, they may cover routine activities that form part of the normal business activities of the Group and are an accepted part of engaging with stakeholders. To ensure that neither the Group nor any of its subsidiaries inadvertently breaches the UK Companies Act 2006, authority is sought from shareholders at the AGM to make political donations.

HSBC provides administrative support to two political action committees ('PACs') in the US funded by voluntary political contributions by eligible employees. We do not control the PACs, and all decisions regarding the amounts and recipients of contributions are directed by a voluntary Board Finance Committee, which consists of contributing eligible employees. The PACs recorded combined political donations of $100,250 during 2022 (2021: $15,500).

Charitable contributions

For details of charitable contributions, see page 84.

Internal control

The Board is responsible for maintaining and reviewing the effectiveness of risk management and internal control systems, and for determining the level and type of risks the Group is willing to take in achieving its strategic objectives.

To meet this requirement and to discharge its obligations under the FCA Handbook and the PRA Handbook, procedures have been designed: for safeguarding assets against unauthorised use or disposal; for maintaining proper accounting records; and for ensuring the reliability and usefulness of financial information used within the business or for publication.

These procedures provide reasonable assurance against material misstatement, errors, losses or fraud. They are designed to provide effective internal control within the Group and accord with the Financial Reporting Council's guidance for Directors issued in 2014, on risk management, internal control and related financial and business reporting. The procedures have been in place throughout the year and up to 21 February 2023, the date of approval of the *Annual Report and Accounts 2022*.

The key risk management and internal control procedures include the following:

Global Principles

The Group's Global Principles set an overarching standard for all policies and procedures and are fundamental to the Group's risk management structure. They inform and connect our purpose, values, strategy and risk management principles, guiding us to do the right thing and treat our customers and our colleagues fairly at all times.

Risk management framework

The risk management framework supports our Global Principles. It outlines the key principles and practices that we employ in managing material risks. It applies to all categories of risk and supports a consistent approach in identifying, assessing, managing and reporting the risks we accept and incur in our activities.

Delegation of authority within limits set by the Board

Subject to certain matters reserved for the Board, the Group Chief Executive has been delegated authority limits and powers within which to manage the day-to-day affairs of the Group, including the right to sub-delegate those limits and powers. Each relevant Group Executive Committee member or executive Director has delegated authority within which to manage the day-to-day affairs of the business or function for which he or she is accountable.

Delegation of authority from the Board requires those individuals to maintain a clear and appropriate apportionment of significant responsibilities and to oversee the establishment and maintenance of systems of control that are appropriate to their business or function. Authorities to enter into credit and market risk exposures are delegated with limits to line management of Group companies. However, credit proposals with specified higher-risk characteristics require the concurrence of the appropriate global function. Credit and market risks are measured and reported at subsidiary company level and aggregated for risk concentration analysis on a Group-wide basis.

Risk identification and monitoring

Systems and procedures are in place to identify, assess, control and monitor the material risk types facing HSBC as set out in the risk management framework. The Group's risk measurement and reporting systems are designed to help ensure that material risks are captured with all the attributes necessary to support well-founded

decisions, that those attributes are accurately assessed and that information is delivered in a timely manner for those risks to be successfully managed and mitigated.

Changes in market conditions/practices

Processes are in place to identify new risks arising from changes in market conditions/practices or customer behaviours, which could expose the Group to heightened risk of loss or reputational damage. The Group employs a top and emerging risks process to provide forward-looking views of issues with the potential to threaten the execution of our strategy or operations over the medium to long term.

We remain committed to investing in the reliability and resilience of our IT systems and critical services, including those provided by third parties, that support all parts of our business. We do so to help protect our customers, affiliates and counterparties, and to help ensure that we minimise any disruption to services that could result in reputational and regulatory consequences. In our approach to defend against these threats, we invest in business and technical controls to help us detect, manage and recover from issues, including data loss, in a timely manner.

We continue our focus on the quality and timeliness of the data used to inform management decisions, through measures such as early warning indicators, prudent active risk management of our risk appetite, and ensuring regular communication with our Board and other key stakeholders.

Responsibility for risk management

All employees are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model. This is an activity-based model to delineate management accountabilities and responsibilities for risk management and the control environment. The second line of defence sets the policy and guidelines for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the first line of defence (the risk owners) on effective risk management.

The Board delegated authority to the GAC and it reviewed the independence, autonomy and effectiveness of the Group's policies and procedures on whistleblowing, including the procedures for the protection of staff who raise concerns of detrimental treatment.

Strategic plans

Strategic plans are prepared for global businesses, global functions and geographical regions within the framework of the Group's overall strategy. Financial resource plans, informed by detailed analysis of risk appetite describing the types and quantum of risk that the Group is prepared to take in executing its strategy, are prepared and adopted by all major Group operating companies and set out the key business initiatives and the likely financial effects of those initiatives.

The effectiveness of the Group's system of risk management and internal control is reviewed regularly by the Board, the GRC and the GAC.

During 2022, the GRC continued to focus on the oversight of risk transformation activities to strengthen our risk management capabilities and to develop a best-in-class Risk function. In 2023, the GRC will continue to focus on overseeing emerging risks and potential risks arising from new products and offerings.

The GRC and the GAC received assurance from executive management that a thorough risk assessment had been undertaken and controls were in place to mitigate the risks arising from the Group's key activities. Necessary actions will be taken to remedy any failings or weaknesses identified from these activities.

Internal control over financial reporting

HSBC is required to comply with section 404 of the US Sarbanes-Oxley Act of 2002 and assess its effectiveness of internal control over financial reporting at 31 December 2022. In 2014, the GAC endorsed the adoption of the principles of the Committee of Sponsoring Organizations of the Treadway Commission ('COSO') 2013 framework for the monitoring of risk management and internal control systems to satisfy the requirements of section 404 of the Sarbanes-Oxley Act.

The key risk management and internal control procedures over financial reporting include the following:

Entity level controls

The primary mechanism through which comfort over risk management and internal control systems is achieved is through assessments of the effectiveness of controls to manage risk, and the reporting of issues on a regular basis through the various risk management and risk governance forums. Entity level controls are a defined suite of internal controls that have a pervasive influence over the entity as a whole and meet the principles of the COSO framework. They include controls related to the control environment, such as the Group's values and ethics, the promotion of effective risk management and the overarching governance exercised by the Board and its non-executive committees. The design and operational effectiveness of entity level controls are assessed annually as part of the assessment of the effectiveness of internal controls over financial reporting. If issues are significant to the Group, they are escalated to the GRC and also to the GAC, if concerning financial reporting matters.

Process level transactional controls

Key process level controls that mitigate the risk of financial misstatement are identified, recorded and monitored in accordance with the risk framework. This includes the identification and assessment of relevant control issues against which action plans are tracked through to remediation. Further details of HSBC's approach to risk management can be found on page 132. The GAC has continued to receive regular updates on HSBC's ongoing activities for improving the effective oversight of end-to-end business processes, and management continued to identify opportunities for enhancing key controls, such as through the use of automation technologies.

Financial reporting

The Group's financial reporting process is controlled using documented accounting policies and reporting formats, supported by detailed instructions and guidance on reporting requirements, issued to all reporting entities within the Group in advance of each reporting period end. The submission of financial information from each reporting entity is supported by a certification by the responsible financial officer and analytical review procedures at reporting entity and Group levels.

Group Disclosure and Controls Committee

Chaired by the Group Chief Financial Officer, the Group Disclosure and Controls Committee supports the discharge of the Group's obligations under relevant legislation and regulation including the UK and Hong Kong listing rules, the UK Market Abuse Regulation and US Securities and Exchange Commission rules. In so doing, the Group Disclosure and Controls Committee is empowered to determine whether a new event or circumstance should be disclosed, including the form and timing of such disclosure, and review certain material disclosures made or to be made by the Group. The membership of the Group Disclosure and Controls Committee consists of senior management, including the Group Chief Financial Officer, Group Chief Risk and Compliance Officer, Group Chief Legal Officer, and Group Company Secretary and Chief Governance Officer. The Group's brokers, external auditors and its external legal counsel also attend as required. The integrity of disclosures is underpinned by structures and processes within the Global Finance and Group Risk and Compliance functions that support rigorous analytical review of financial reporting and the maintenance of proper accounting records. As required by the Sarbanes-Oxley Act, the Group Chief Executive and the Group Chief Financial Officer have certified that the Group's disclosure controls and procedures were effective as at the end of the period covered by the *Annual Report and Accounts 2022*.

The annual review of the effectiveness of the Group's system of risk management and internal control over financial reporting was conducted with reference to the COSO 2013 framework. Based on the assessment performed, the Directors concluded that for the year ended 31 December 2022, the Group's internal control over financial reporting was effective.

PwC has audited the effectiveness of HSBC's internal control over financial reporting and has given an unqualified opinion.

Other information included in the Annual Report and Accounts 2022

We include other non-statutory information in the *Annual Report and Accounts* to enable a broader perspective of our performance for the period, including ESG and regulatory capital and liquidity information. We highlight on pages 14 and 264 that we are seeking to enhance our governance, process, systems and controls in both areas, although the scale and nature of the challenges differ between reporting areas. Our improvements in regulatory reporting are to ensure this reporting is produced to a comparable standard of control as our financial reporting. ESG reporting is fast evolving, with few globally consistent reporting standards and a high reliance on external data. The GAC provides oversight to our reporting improvements in both areas, and is also focused on increasing the level of internal and external assurance in these areas, in line with wider market developments (set out on page 264).

Going concern

The Board, having made appropriate enquiries, is satisfied that the Group as a whole has adequate resources to continue operations for a period of at least 12 months from the date of this report, and it therefore continues to adopt the going concern basis in preparing the financial statements.

For further details, see page 42.

Employees

At 31 December 2022, HSBC had a total workforce equivalent to 219,000 full-time employees compared with 220,000 at the end of 2021. Our main centres of employment were India with approximately 39,000 employees, the UK with 33,000, mainland China with 32,000, Hong Kong with 27,000, Mexico with 17,000 and France with 6,000.

Our business spans many cultures, communities and continents. We aspire to provide a high-performing environment where our colleagues can fulfil their potential by building their skills and capabilities while focusing on the development of a diverse and inclusive culture. We use employee surveys to assess progress and make changes. We want to provide an open culture, where our colleagues feel connected and supported to speak up, and where our leaders encourage and use feedback. Where we make organisational changes, we support our colleagues, in particular where there are job impacts.

Employee relations

We consult with and, where appropriate, negotiate with employee representative bodies where we have them. It is our policy to maintain well-developed communications and consultation programmes with all employee representative bodies. There have been no material disruptions to our operations from labour disputes during the past five years.

We are committed to complying with the applicable employment laws and regulations in the jurisdictions in which we operate, including in relation to working hours and rest periods. HSBC's global employment practices and relations policy provides the framework and controls through which we seek to uphold that commitment.

Diversity and inclusion

Our customers, colleagues and communities span many cultures and continents. We value difference and believe that diversity makes us stronger. We are dedicated to building a diverse and connected workforce where everyone feels a sense of belonging. In 2022, we introduced a social well-being index that measures the connectedness of our colleagues as we embrace hybrid working practices.

Our Group People Committee, which is made up of Group Executive Committee members, governs our diversity and inclusion agenda. It meets regularly to agree actions to improve diverse representation and build a more inclusive culture where our colleagues can bring their best selves to work. Members of our Group Executive Committee are held to account for the actions they take on diversity via aspirational targets contained within their performance scorecards.

We expect all colleagues at HSBC to treat each other with dignity and respect to ensure an inclusive environment. Our policies make it clear that we do not tolerate unlawful discrimination, bullying or harassment on any grounds.

To align our approach to inclusion best practices, we participate in global diversity benchmarks that help us to identify improvement opportunities. We also track a large number of diversity and inclusion metrics, including those included in the Group executive scorecards, which enable us to pinpoint inclusion barriers and enable us to take action where required. Our approach to diversity and inclusion is set out on page 74 alongside our goals and progress.

Further details of our diversity and inclusion activity, alongside our Gender and Ethnicity Pay Gap Reports 2022, can be found at www.hsbc.com/diversitycommitments.

Employment of people with a disability

We strongly believe in providing equal opportunities for all employees. The employment of people with a disability is included in this commitment. The recruitment, training, development and promotion of people with a disability are based on the aptitudes and abilities of the individual. Should employees become disabled during their employment with us, efforts are made to continue their employment. Where necessary, we will provide appropriate training, facilities and reasonable equipment.

Employee development

We aim to build a dynamic, inclusive culture where the best want to develop the skills and experiences that help them fulfil their potential. This determines how we develop our people and recruit, identify and nurture talent. A range of resources bring this to life including:

- HSBC University, our platform for learning and development with specific business and technical academies;
- our My HSBC Career portal, which offers career development information and resources; and
- HSBC Talent Marketplace, our new online platform that uses AI to provide opportunities to learn as we work.

Everyone at HSBC annually completes global mandatory training. It plays a critical role in shaping our culture by ensuring everyone is focused on issues that are fundamental to working at HSBC, from sustainability, to financial crime risk, to our intolerance of bullying and harassment.

As the opportunities we face change, we provide development to key groups of colleagues through business and technical academies. This includes our risk academy, which helps us to develop broad capabilities in traditional areas of risk like financial crime but also in emerging risk issues like climate risk and the ethics of AI and data.

Our approach to learning is skills based. Our academies work with our businesses to identify the key skills and capabilities we need in the future. Alongside this, we help colleagues identify, assess and develop the skills that match their ambition and aspirations.

Our platform for learning content is Degreed. This helps colleagues identify, assess and develop key skills through internal and external training materials in a way that suits them. Content can range from quick videos, articles or podcasts to packaged programmes or learning pathways.

In 2021, we launched the HSBC Talent MarketPlace, an AI-based platform, which matches colleagues to projects and experiences based on their aspirations. In 2022, we rolled the platform out to an additional 83,000 colleagues and we will continue the global roll-out in 2023.

Effective people management and impactful leadership remain critical to our ability to energise for growth. Following the success of our refreshed executive development curriculum in 2021, we launched a new programme for our Managing Director colleagues in 2022. This combines internal programmes and business school activities with targeted technical programmes on key topics and skills.

Health and safety

We are committed to providing a safe and healthy working environment for everyone. We have adopted global policies, mandatory procedures, and incident and information reporting systems across the organisation that reflect our core values and are

aligned to international standards. Our global health and safety performance is subject to ongoing monitoring and assurance to ensure we are compliant with relevant laws and regulations.

Our chief operating officers have overall responsibility for engendering a positive health and safety culture and ensuring that global policies, procedures and systems are put into practice locally. They also have responsibility for ensuring all local legal requirements are met.

We delivered a range of programmes in 2022 to help us understand and manage our health and safety risks:

- We continued to provide enhancements to our workplaces globally to minimise the risks of Covid-19, including enhanced cleaning, improved ventilation and social distancing measures, as well as reviewing and adjusting our risk control measures as government restrictions were lifted.
- We reinforced our advice and risk assessment and control methodology on working from home for employees adopting a hybrid work style, providing more awareness and best practices on good ergonomics and well-being.
- We delivered health and safety training and awareness to 240,000 of our employees and contractors globally, ensuring roles and responsibilities were clear and understood.
- We completed the annual safety inspection on all of our buildings globally, subject to local Covid-19 restrictions, to ensure we were meeting our standards and continuously improving our safety performance.
- We continued to focus on enhancing the safety culture in our supply chain through our SAFER Together programme, covering the five key elements of best practice safety culture, including speaking up about safety, and recognising excellence. Our 2022 safety climate survey results showed that we continue to maintain a positive safety culture that is significantly above the industry average. A particular strength that the survey identified is our encouragement of colleagues to make suggestions on how to improve health and safety.
- We expanded our guidance and training programme for our construction partners, focusing on our key markets globally, to reduce the likelihood of accidents occurring by helping them understand and deliver industry-leading health and safety performance. More than 3,400 construction workers received safety passporting training across 20 countries.
- Our Eat Well Live Well programme continued educating and informing our colleagues on how to make healthy food and drink choices. Launched in 2019, and now live in 12 markets across all regions, the programme has helped to shift HSBC employee diets towards more sustainable choices, with a more than 50% rise in healthy food options being selected in our workplace catering outlets since launch. Furthermore, with digital health tools and over 50 healthy and plant-forward recipes created by chefs available online, employees are supported to continue to make healthy choices when away from the workplace.
- Protection of our colleagues and operations is of critical importance and we have effective controls in place to protect our people from natural disasters (such as storms and earthquakes). In 2022, there were 38 named storms that passed over 1,667 of our buildings, resulting in no injuries or material business impact.

Employee health and safety

	2022	2021	2020
Rate of workplace fatalities per 100,000 employees	**—**	—	—
Number of major injuries to employees[1]	**7**	14	15
All injury rate per 100,000 employees	**70**	64	88
Lost days due to work injury	**485**	358	449

1 *Fractures, dislocation, concussion, loss of consciousness, overnight admission to hospital.*

Remuneration

HSBC's pay and performance strategy is designed to reward competitively the achievement of long-term sustainable performance and attract and motivate the very best people, regardless of gender, ethnicity, age, disability or any other factor unrelated to performance or experience with the Group, while performing their role in the long-term interests of our stakeholders.

For further details of the Group's approach to remuneration, see page 292.

Employee share plans

Share options and discretionary awards of shares granted under HSBC share plans align the interests of employees with the creation of shareholder value. The following table sets out the particulars of outstanding options, including those held by employees working under employment contracts that are regarded as 'continuous contracts' for the purposes of the Hong Kong Employment Ordinance. The options were granted at nil consideration. No options have been granted to substantial shareholders and suppliers of goods or services, nor in excess of the individual limit for each share plan. No options were cancelled by HSBC during the year.

A summary for each plan of the total number of the options that were granted, exercised or lapsed during 2022 is shown in the following table. Further details required to be disclosed pursuant to Chapter 17 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited are available on our website at www.hsbc.com/who-we-are/leadership-and-governance/remuneration and on the website of The Stock Exchange of Hong Kong Limited at www.hkex.com.hk, or can be obtained upon request from the Group Company Secretary and Chief Governance Officer, 8 Canada Square, London E14 5HQ.

Particulars of options held by Directors of HSBC Holdings are set out on page 287.

Note 5 on the financial statements gives details of share-based payments, including discretionary awards of shares granted under HSBC share plans.

All-employee share plans

HSBC operates all-employee share option plans under which options are granted over HSBC ordinary shares. Subject to leaver provisions, options are normally exercisable after three or five years. During 2022, options were granted by reference to the average market value of HSBC Holdings ordinary shares on the five business days immediately preceding the invitation date, then applying a discount of 20%. The closing price for HSBC Holdings ordinary shares quoted on the London Stock Exchange on 26 September 2022, the day before the options were granted and as derived from the Daily Official List, was £5.0160.

The HSBC Holdings Savings-Related Share Option Plan (UK) will expire on 24 April 2030, by which time the plan may be extended with approval from shareholders, unless the Directors resolve to terminate the plan at an earlier date.

The HSBC International Employee Share Purchase Plan was introduced in 2013 and now includes employees based in 31 jurisdictions, although no options are granted under this plan.

During 2022, approximately 189,000 employees were offered participation in these plans.

HSBC Holdings Savings-Related Share Option Plan (UK)

Dates of awards		Exercise price		Usually exercisable		HSBC Holdings ordinary shares				
from	to	from	to	from	to	**At 1 Jan 2022**	**Granted during year[1]**	**Exercised during year[2]**	**Lapsed during year**	**At 31 Dec 2022**
		(£)	(£)							
22 Sep 2015	27 Sep 2022	2.6270	5.9640	1 Nov 2020	28 Apr 2028	**123,196,850**	**8,928,527**	**3,483,332**	**12,991,322**	**115,650,723**

1 *Options over HSBC ordinary shares granted in response to approximately 9,564 applications from HSBC employees in the UK on 27 September 2022.*
2 *The weighted average closing price of the shares immediately before the dates on which options were exercised was £5.0534.*

Statement of compliance

The statement of corporate governance practices set out on pages 239 to 311 and the information referred to therein constitutes the 'Corporate governance report' and 'Report of the Directors' of HSBC Holdings. The websites referred to do not form part of this report.

Relevant corporate governance codes, role profiles and policies

UK Corporate Governance Code	www.frc.org.uk
Hong Kong Corporate Governance Code (set out in Appendix 14 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited ('HKEx'))	www.hkex.com.hk
Descriptions of the roles and responsibilities of the: – Group Chairman – Group Chief Executive – Senior Independent Director – Board	www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities
Board and senior management	www.hsbc.com/who-we-are/leadership-and-governance
Roles and responsibilities of the Board's committees	www.hsbc.com/who-we-are/leadership-and-governance/board-committees
Board's policies on: – diversity and inclusion – shareholder communication – human rights – remuneration practices and governance	www.hsbc.com/who-we-are/leadership-and-governance/board-responsibilities
Global Internal Audit Charter	www.hsbc.com/who-we-are/leadership-and-governance/corporate-governance-codes/internal-control

HSBC is subject to corporate governance requirements in both the UK and Hong Kong. During 2022, save to the extent referred to in the next paragraph, HSBC complied with the provisions and requirements of both the UK and Hong Kong Corporate Governance Codes.

Dame Carolyn Fairbairn was appointed as Chair to the Group Remuneration Committee on 29 April 2022 and has been a member of such committee since September 2021. In approving Dame Carolyn Fairbairn's appointment, the Board considered the UK Corporate Governance Code expectation that the Chair has served at least 12 months as a member on the committee before assuming the position of Chair. Before her appointment she had served on the Group Remuneration Committee for eight months. However, given her previous experience as both a member and chair of the remuneration committees of other UK listed companies, the Board approved the appointment of Dame Carolyn Fairbairn as Chair.

Under the Hong Kong Code, the audit committee should be responsible for the oversight of all risk management and internal control systems. HSBC's Group Risk Committee is responsible for oversight of internal control, other than internal control over financial reporting, and risk management systems. This is permitted under the UK Corporate Governance Code.

HSBC Holdings has codified obligations for transactions in Group securities in accordance with the requirements of the UK Market Abuse Regulation and the rules governing the listing of securities on HKEx, save that the HKEx has granted waivers from strict compliance with the rules that take into account accepted practices in the UK, particularly in respect of employee share plans. During the year, all Directors were reminded of their obligations in respect of transacting in HSBC Group securities. Following specific enquiry all Directors have confirmed that they have complied with their obligations.

On behalf of the Board

Mark E Tucker

Group Chairman

HSBC Holdings plc

Registered number 617987

21 February 2023

Directors' responsibility statement

The Directors are responsible for preparing the *Annual Report and Accounts 2022*, the Directors' remuneration report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law, the Directors have prepared the parent company ('Company') and Group financial statements in accordance with UK-adopted international accounting standards. The company has also prepared financial statements in accordance with international financial reporting standards adopted pursuant to Regulation (EC) N0 1606/2002 as it applies in the European Union. In preparing these financial statements, the Directors have also elected to comply with International Financial Reporting Standards issued by the International Accounting Standards Board (IFRSs as issued by IASB). Under company law, the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and Group, and of the profit or loss of the Company and Group for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable UK-adopted international accounting standards, international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union and IFRSs issued by IASB have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Company and Group will continue in business.

The Directors are also responsible for safeguarding the assets of the Company and the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions, and disclose with reasonable accuracy at any time the financial position of the Company and the Group and enable them to ensure that the financial statements and the Directors' remuneration report comply with the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

The Directors are responsible for the maintenance and integrity of the *Annual Report and Accounts 2022* as they appear on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors consider that the *Annual Report and Accounts 2022,* taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

Each of the Directors, whose names and functions are listed in the 'Report of the Directors: Corporate governance report' on pages 240 to 243 of the *Annual Report and Accounts 2022*, confirms that, to the best of their knowledge:

- the Group financial statements, which have been prepared in accordance with UK-adopted international accounting standards, international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union and IFRSs issued by IASB, give a true and fair view of the assets, liabilities, financial position, and profit or loss of the Group; and
- the management report represented by the Report of the Directors includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

The Group Audit Committee has responsibility, delegated to it from the Board, for overseeing all matters relating to external financial reporting. The Group Audit Committee report on page 262 sets out how the Group Audit Committee discharges its responsibilities.

Disclosure of information to auditors

In accordance with section 418 of the Companies Act 2006, the Directors' report includes a statement, in the case of each Director in office as at the date the Report of the Directors is approved, that:

- so far as the Director is aware, there is no relevant audit information of which the Company's auditors are unaware; and
- they have taken all the steps they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

On behalf of the Board

Mark E Tucker

Group Chairman

HSBC Holdings plc

Registered number 617987

21 February 2023

Financial statements

The financial statements provide detailed information and notes on our income, balance sheet, cash flows and changes in equity, alongside a report from our independent auditors.

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Building on our international connections

We aim to collaborate internationally to make a difference for our customers. In May 2022, we supported a Hong Kong-based client with its investment in one of London's tallest skyscrapers. We helped C C Land Holdings Limited with a £605m refinancing of The Leadenhall Building in the City of London financial district. The international property development and investment company bought the 225-metre tall tower in 2017 for £1.15bn, in what was the second biggest sale of a UK building at the time. The refinancing was co-ordinated by colleagues from our UK and Hong Kong teams, and incorporated support from three other banks.

Independent auditors' report to the members of HSBC Holdings plc

Report on the audit of the financial statements

Opinion

In our opinion, HSBC Holdings plc's group financial statements and company financial statements (the "financial statements")

- give a true and fair view of the state of the group's and of the company's affairs as at 31 December 2022 and of the group's and company's profit and the group's and company's cash flows for the year then ended;
- have been properly prepared in accordance with UK-adopted international accounting standards; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements, included within the Annual Report and Accounts 2022 (the "Annual Report"), which comprise: the consolidated and company balance sheets as at 31 December 2022; the consolidated and company income statements and the consolidated and company statements of comprehensive income for the year then ended, the consolidated and company statements of cash flows for the year then ended, the consolidated and company statements of changes in equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies and other explanatory information. Certain notes to the financial statements have been presented elsewhere in the Annual Report, rather than in the notes to the financial statements. These are cross-referenced from the financial statements and are identified as '(Audited)'. The relevant disclosures are included in the Risk review section on pages 131 to 238 and the Directors remuneration report disclosures on pages 276 to 301.

Our opinion is consistent with our reporting to the Group Audit Committee ('GAC').

Separate opinion in relation to international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union

As explained in note 1.1(a) to the financial statements, the group and company, in addition to applying UK-adopted international accounting standards, have also applied international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union.

In our opinion, the group and company financial statements have been properly prepared in accordance with international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union.

Separate opinion in relation to IFRSs as issued by the IASB

As explained in note 1.1(a) to the financial statements, the group and company, in addition to applying UK-adopted international accounting standards, have also applied international financial reporting standards (IFRSs) as issued by the International Accounting Standards Board (IASB).

In our opinion, the group and company financial statements have been properly prepared in accordance with IFRSs as issued by the IASB.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)"), International Standards on Auditing issued by the International Auditing and Assurance Standards Board ("ISAs") and applicable law. Our responsibilities under ISAs (UK) and ISAs are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by either the FRC's Ethical Standard or Article 5(1) of Regulation (EU) No 537/2014 were not provided to the company or its controlled undertakings.

Other than those disclosed in note 6, we have provided no non-audit services to the company or its controlled undertakings in the period under audit.

Our audit approach

Overview

Audit scope

- This was the fourth year that it has been my responsibility to form this opinion on behalf of PricewaterhouseCoopers LLP, who you first appointed on 31 March 2015 in relation to that year's audit. In addition to forming this opinion, in this report we have also provided information on how we approached the audit, how it changed from the previous year and details of the significant discussions that we had with the GAC.

Key audit matters

- Expected credit losses - Impairment of loans and advances (group)
- Impairment of investment in associate - Bank of Communications Co., Ltd ('BoCom') (group)
- Investments in subsidiaries (company)
- Valuation of defined benefit pension obligations (group)
- Held for sale accounting (group)

Materiality

- Overall group materiality: US$1bn (2021: US$970m) based on 5% of adjusted profit before tax.
- Overall company materiality: US$950m (2021: US$920m) based on 0.75% of total assets. This would result in an overall materiality of US$2bn and was therefore reduced below the group materiality.
- Performance materiality: US$750m (2021: US$725m) (group) and US$712m (2021: US$690m) (company).

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

This is not a complete list of all risks identified by our audit.

Held for sale accounting (group) is a new key audit matter this year. Otherwise, the key audit matters below are consistent with last year.

Expected credit losses – Impairment of loans and advances (group)

Nature of the key audit matter

Determining expected credit losses ('ECL') involves management judgement and is subject to a high degree of estimation uncertainty.

Management makes various assumptions when estimating ECL. The significant assumptions that we focused on in our audit included those with greater levels of management judgement and for which variations had the most significant impact on ECL. These included assumptions made in determining forward looking economic scenarios and their probability weightings (specifically the central and downside scenarios given these have the most material impact on ECL) and estimating management judgemental adjustments and significant discounted cash flows for material credit impaired exposures in relation to the China offshore unsecured commercial real estate portfolio.

The level of estimation uncertainty and judgement has remained high during 2022 as a result of the uncertain macroeconomic and geopolitical environment, high levels of inflation and a rising global interest rate environment, as well as developments in China's commercial real estate sector. Macroeconomic conditions vary between territories and industries, leading to uncertainty around judgements made in determining the severity and probability weighting of macroeconomic variable forecasts across the different economic scenarios used in ECL models.

The modelling methodologies used to estimate ECL are developed using historical experience. The impact of the prevailing macroeconomic conditions has also resulted in certain limitations in the reliability of these methodologies to forecast the extent and timing of future customer defaults and therefore estimate ECL. In addition, modelling methodologies do not incorporate all factors that are relevant to estimating ECL, such as differentiating the impact on industry sectors and economic conditions. These limitations are addressed with management judgemental adjustments, the measurement of which is inherently judgemental and subject to a high level of estimation uncertainty, in particular in relation to the China commercial real estate offshore portfolio.

Management makes other assumptions which are less judgemental or for which variations have a less significant impact on ECL. These assumptions include:

- the methodologies used in quantitative scorecards for determining customer risk ratings ('CRRs');
- estimating expected cash flows and collateral valuations for credit impaired corporate exposures, other than in relation to the China commercial real estate offshore portfolio;
- model methodologies themselves; and
- quantitative and qualitative criteria used to assess significant increases in credit risk.

Matters discussed with the Group Audit Committee

We held discussions with the GAC covering governance and controls over ECL, with a significant focus on the uncertain prevailing macroeconomic conditions and developments in China's commercial real estate sector. We discussed a number of areas, including:

- the severity of macroeconomic scenarios, and their related probability weightings, across territories;
- management judgemental adjustments and the nature and extent of analysis used to support those adjustments;
- significant assumptions used to estimate the discounted cash inflow projections for defaulted exposures in relation to unsecured offshore China commercial real estate;
- management's policies, governance and controls over model validation and monitoring; and
- the disclosures made in relation to ECL, in particular, the impact of adjustments on determining ECL.

How our audit addressed the Key Audit Matter

We assessed the design and effectiveness of governance and controls over the estimation of ECL. We observed management's review and challenge in governance forums for (1) the determination of macroeconomic scenarios and their probability weightings, and (2) the assessment of ECL for Retail and Wholesale portfolios, including the assessment of model limitations and any resulting management judgemental adjustments.

We also tested controls over:

- model validation and monitoring;
- credit reviews that determine customer risk ratings for wholesale customers;
- the identification of credit impaired triggers;
- the input of critical data into source systems and the flow and transformation of critical data from source systems to impairment models and management judgemental adjustments;
- the calculation and approval of management judgemental adjustments to modelled outcomes; and
- approval of significant individual impairments.

We involved our economic experts in assessing the significant assumptions made in determining the severity and probability weighting of macroeconomic variables ("MEV") forecasts. These assessments considered the sensitivity of ECL to variations in the severity and probability weighting of MEV forecasts. We involved our modelling experts in assessing the appropriateness of the significant assumptions and methodologies used for models and certain management judgemental adjustments. We independently re-performed the calculations for a sample of those models and certain management judgemental adjustments. In respect of unsecured offshore China commercial real estate, we involved our business recovery experts in assessing certain significant management judgemental adjustments and discounted cash flows for a sample of credit impaired exposures. We further considered whether the judgements made in selecting the significant assumptions would give rise to indicators of possible management bias.

In addition, we performed substantive testing over:

- the compliance of ECL methodologies and assumptions with the requirements of IFRS 9;
- the appropriateness and application of the quantitative and qualitative criteria used to assess significant increases in credit risk;
- a sample of critical data used in ECL models and to estimate management judgemental adjustments;
- assumptions and critical data for a sample of credit impaired wholesale exposures; and
- a sample of CRRs applied to the wholesale exposures.

We evaluated and tested the Credit Risk disclosures made in the Annual Report.

Relevant references in the Annual Report and Accounts 2022

- Credit risk disclosures, page 145.
- Group Audit Committee Report, page 262.
- Note 1.2(d):Financial instruments measured at amortised cost, page 340.
- Note 1.2(i): Impairment of amortised cost and FVOCI financial assets, page 341.

Impairment of investment in associate – Bank of Communications Co., Ltd ('BoCom') (group)

Nature of the key audit matter

At 31 December 2022, the fair value of the investment in BoCom, based on the share price, was US$15.2bn lower than the carrying value ('CV') of US$23.3bn.

This is an indicator of potential impairment. An impairment test was performed by management, with supporting sensitivity analysis, using the higher of fair value and value in use ('VIU'). The VIU was $0.2bn in excess of the CV. On this basis, management concluded no impairment was required.

The methodology in the VIU model is dependent on various assumptions, both short term and long term in nature. These assumptions, which are subject to estimation uncertainty, are derived from a combination of management's judgement, analysts' forecasts and market data. The significant assumptions that we focused our audit on were those with greater levels of management judgement and for which variations had the most significant impact on the VIU. Specifically, these included:

- the discount rate;
- short term assumptions for operating income growth rate, cost-income ratio, and expected credit losses;
- long term assumptions for profit and asset growth rates, expected credit losses, and effective tax rates; and
- capital related assumptions (risk-weighted assets as a percentage of total assets, capital adequacy ratio and tier 1 capital adequacy ratio).

Matters discussed with the Group Audit Committee

We discussed the appropriateness of the VIU methodology and significant assumptions with the GAC, giving consideration to the macroeconomic environment, the outlook for the Chinese banking market and the fair value, which has been lower than the carrying value for approximately 11 years. We also discussed the disclosures made in relation to BoCom, including reasonably possible alternatives for the significant assumptions, the use of sensitivity analysis to explain estimation uncertainty and the changes in certain assumptions that would result in the VIU being equal to the CV.

How our audit addressed the Key Audit Matter

We tested controls in place over the significant assumptions and the model used to determine the VIU. We assessed the appropriateness of the methodology used, and the mathematical accuracy of the calculations, to estimate the VIU. In respect of the significant assumptions, our testing included the following:

- challenging the appropriateness of the significant assumptions and, where relevant, their interrelationships;
- obtaining evidence for data supporting significant assumptions including historic experience, external market information, third-party sources including analysts reports, information from BoCom management and historically available BoCom public information;
- assessing the impact on the VIU of reasonable variations in certain significant assumptions, both individually and in aggregate;
- determining a reasonable range for the discount rate used within the model, with the assistance of our valuation experts, and comparing it to the discount rate used by management; and
- assessing whether the judgements made in deriving the significant assumptions give rise to indicators of possible management bias.

We observed the meetings between management and BoCom management, held specifically to identify facts and circumstances impacting assumptions relevant to the determination of the VIU.

Representations were obtained from management that assumptions used were consistent with information currently available to the group.

We evaluated and tested the disclosures made in the Annual Report in relation to BoCom.

Relevant references in the Annual Report and Accounts 2022

- Group Audit Committee Report, page 262.
- Note 1.2(a): Critical accounting estimates and judgements, page 338.
- Note 18: Interests in associates and joint ventures, page 379.

Investments in subsidiaries (company)

Nature of the key audit matter

Management reviewed investments in subsidiaries for indicators of impairment and indicators that impairment charges recognised in prior periods may no longer exist or may have decreased in accordance with IAS 36 as at 31 December 2022. Where indicators have been identified management estimated the recoverable amount using the higher of value in use ('VIU') or fair value less cost to sell. Management's assessment resulted in a partial reversal of an impairment charge of US$2.5bn in relation to the investment in HSBC Overseas Holdings (UK) Limited ('HOHU'), which is an immediate holding company of certain businesses in North America. This resulted in investment in subsidiaries of $US167.5bn at 31 December 2022.

The methodology used to estimate the recoverable amount is dependent on various assumptions, both short term and long term in nature. These assumptions, which are subject to estimation uncertainty, are derived from a combination of management's judgement, experts engaged by management and market data. The significant assumptions that we focused our audit on were those with greater levels of management judgement and for which variations had the most significant impact on the recoverable amount. Specifically, these included:

- HSBC's business plan for 2023 to 2027 focusing on revenue, cost and ECL forecasts including the impact of climate change risk;
- regulatory capital requirements;
- long term growth rates; and
- discount rates.

Matters discussed with the Group Audit Committee

We discussed the partial reversal of the impairment charge for HOHU, the appropriateness of methodologies used and significant assumptions with the GAC, giving consideration to the macroeconomic outlook and HSBC's strategy. We considered reasonable possible alternatives for significant assumptions.

How our audit addressed the Key Audit Matter

We tested controls in place over significant assumptions and the model used to determine the recoverable amounts. We assessed the appropriateness of the methodology used, and tested the mathematical accuracy of the calculations, to estimate the recoverable amounts. In respect of the significant assumptions, our testing included the following:

- challenging the achievability of management's business plan and the prospects for HSBC's businesses, as well as considering the achievement of historic forecasts;
- obtaining and evaluating evidence relating to significant assumptions, from a combination of historical experience and external market and other financial information;
- assessing whether the cash flows included in the model were in accordance with the relevant accounting standard;
- assessing the sensitivity of the VIU to reasonable variations in significant assumptions, both individually and in aggregate; and
- determining a reasonable range for the discount rate used within the model, with the assistance of our valuation experts, and comparing it to the discount rate used by management.

We evaluated and tested the disclosures made in the Annual Report in relation to investment in subsidiaries.

Relevant references in the Annual Report and Accounts 2022

- Note 19: Investments in subsidiaries, page 382.

Valuation of defined benefit pensions obligations (group)

Nature of the key audit matter

The group has a defined benefit obligation of US$25.7bn, of which US$18.8bn relates to HSBC Bank (UK) pension scheme.

The valuation of the defined benefit obligation for HSBC Bank (UK) pension scheme is dependent on a number of actuarial assumptions. Management uses an actuarial expert to determine the valuation of the defined benefit obligations. The valuation methodology uses a number of market based inputs and other financial and demographic assumptions. The significant assumptions that we focused our audit on were those with greater levels of management judgement and for which variations had the most significant impact on the liability. Specifically, these included the discount rate, inflation rate and mortality rate.

Matters discussed with the Group Audit Committee

We discussed with the GAC the methodologies and significant assumptions used by management to determine the value of the defined benefit obligation.

How our audit addressed the Key Audit Matter

We tested governance and controls in place over the methodologies and the significant assumptions, including those in relation to the use of management's experts. We also evaluated the objectivity and competence of management's expert involved in the valuation of the defined benefit obligation.

We assessed the appropriateness of the methodology used, and tested the accuracy of the calculation, to estimate the liability. In respect of the significant assumptions, we used our actuarial experts to understand the judgements made by management and their actuarial expert in determining the significant assumptions and compared these assumptions to our independently compiled expected ranges based on market observable indices and the knowledge and opinions of our actuarial experts.

We evaluated and tested the disclosures made in the Annual Report in relation to the defined benefit pension obligation.

Relevant references in the Annual Report and Accounts 2022

- Group Audit Committee Report, page 262.
- Note 1.2(k): Critical accounting estimates and judgements, page 345.
- Note 5: Employee compensation and benefits, page 351.

Held for sale accounting (group)

Nature of the key audit matter

The group has agreements to sell a number of businesses as part of executing its strategy. This has resulted in US$115.9bn of assets and US$114.6bn of liabilities being classified as held for sale as at 31 December 2022, in relation to businesses in France, Canada, Russia and Greece. In addition to the assets and liabilities classified as held for sale, a loss of US$2.4bn has also been recognised in 2022 in relation to the sale of the business in France. For the assets and liabilities to be classified as held for sale, the sale needs to be considered highly probable and expected to complete within 12 months of the date of classification. We focused our audit on the areas with greater levels of management judgement relating to the highly probable threshold being met including the expected timing of completion, the appropriateness of disclosures relating to the highly probable assessment and the loss recognised in relation to the sale of the business in France.

Matters discussed with the Group Audit Committee

We discussed with the GAC the judgements made by management in determining if the highly probable thresholds were met as at 31 December 2022. We also discussed the appropriateness of the disclosure made in the Annual Report which explained how management had concluded that transactions met the highly probable threshold as at 31 December 2022.

How our audit addressed the Key Audit Matter

We tested governance and controls in place over the management process to determine if the highly probable threshold had been met on assets and liabilities classified as held for sale.
We assessed the key judgments made by management to determine whether the highly probable thresholds were met as at 31 December 2022, including their assessment of remaining actions to complete the transactions, any regulatory requirements that need to be met, and the likelihood and expected timing of the transactions being approved by relevant regulators and shareholders.
We also tested the completeness and accuracy of the assets and liabilities that were classified as held for sale and the loss on sale recognised in relation to the French business. We evaluated and tested the disclosures made in the Annual Report in relation to assets and liabilities classified as held for sale.

Relevant references in the Annual Report and Accounts 2022

- Group Audit Committee Report, page 262.
- Note 1.2(o): Critical accounting estimates and judgements, page 347.
- Note 23: Assets held for sale and liabilities of disposal groups held for sale, page 389.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the group and the company, the accounting processes and controls, and the industry in which they operate.

The risks that HSBC faces are diverse, with the interdependencies between them being numerous and complex. In performing our risk assessment we engaged with a number of stakeholders to ensure we appropriately understood and considered these risks and their interrelationships. This includes stakeholders within HSBC and our own experts within PwC. This engagement covered external factors across the geopolitical, macroeconomic and regulatory and accounting landscape, the impact of climate change risk as well as the internal environment at HSBC, driven by strategy and transformation.

We evaluated and challenged management's assessment of the impact of climate change risk, which is set out on page 46, including their conclusion that there is no material impact on the financial statements. In making this evaluation we considered management's use of stress testing and scenario analysis to arrive at the conclusion that there is no material impact on the financial statements. We considered management's assessment on the areas in the financial statements most likely to be impacted by climate risk, including:

- the impact on ECL on loans and advances to customers, for both physical and transition risk;
- the forecast cashflows from management's five year business plan and long term growth rates used in estimating recoverable amounts as part of impairment assessments of investments in subsidiaries, goodwill and intangible assets;
- the impact of climate related terms on the solely payments of principal and interest test for classification and measurement of loans and advances to customers; and
- climate risks relating to contingent liabilities as HSBC faces increased reputational, legal and regulatory risk as it progresses towards its climate ambition.

HSBC's progress on their ESG targets is not included within the scope of this audit. We were engaged separately to provide independent limited assurance to the Directors over the following ESG data:

- the 2019 and 2020 on-balance sheet financed emissions for 6 sectors in total (page 50);
- the cumulative progress made by HSBC on providing and facilitating sustainable financing and investments (page 57); and
- HSBC's own operations' scope 1, 2 and 3 (limited to business travel) greenhouse gas emissions data for 2022 (page 62); and supply chain greenhouse gas emissions for purchased goods and services, and capital goods for 2021 and 2022 (page 64).

The independent limited assurance reports, which explain the scope of our work and the procedures undertaken can be found on: www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre. The work performed for a limited assurance report is substantially less than the work performed for our financial audit, which provides reasonable assurance.

Through our risk assessment, we tailored our determination as to which entities and balances we needed to perform testing over to support our Group opinion, taking into consideration the complex and disaggregated group structure, the accounting processes and controls as well as the industry in which they operate. The risks of material misstatement can be reduced to an acceptable level by testing the most financially significant entities within the Group and those that drive particular significant risks identified as part of our risk assessment. This ensures that sufficient coverage has been obtained for each financial statement line item (FSLI). We continually assessed risks and changed the scope of our audit where necessary.

Our risk assessment and scoping identified certain entities (collectively the Significant Subsidiaries) for which we obtained audit opinions. We obtained full scope audit opinions for the consolidated financial position and performance of The Hongkong and Shanghai Banking Corporation Limited, HSBC Bank plc, and HSBC North America Holdings Inc. We also obtained full scope audit opinions for the company financial position and performance of HSBC UK Bank plc, HSBC Bank Canada and HSBC Mexico S.A. Banco. We obtained audit opinions over specific balances for

HSBC Bank Middle East Limited - UAE Operations. The audits for HSBC Bank plc and HSBC UK Bank plc were performed by other PwC teams in the UK. All other audits were performed by other PwC network firms.

We continued to incorporate elements of unpredictability into our audit scoping, extending the scope of work performed for both The Hongkong and Shanghai Banking Corporation India Branch, and HSBC Bank (China) Limited. These entities are also in scope for The Hongkong and Shanghai Banking Corporation Limited. This was undertaken with consideration of both the relative profitability of these entities in the region and the Group's strategy.

Group-wide audit approach

HSBC has entity level controls that have a pervasive influence across the group, as well as other global and regional governance and controls over aspects of financial reporting, such as those operated by the Global Risk function for expected credit losses. A significant amount of IT and operational processes and controls relevant to financial reporting are undertaken in operations centres run by Digital Business Services ('DBS'). Whilst these operations centres are not separate components, the IT and operational processes and controls are relevant to the financial information of the Significant Subsidiaries. Financial reporting processes and controls are also performed centrally in HSBC's Group Finance function and finance operation centres ('Finance Operations'), including the impairment assessment of goodwill and intangible assets, the consolidation of the group's results, the preparation of financial statements, and management's oversight controls relevant to the group's financial reporting.

Group-wide processes or processes in DBS and Finance Operations are subject to specified audit procedures or an audit over specific FSLIs. These procedures primarily relate to testing of IT general controls, forward looking economic scenarios for ECL, operating expenses, intangible assets, valuation of financial instruments, intercompany eliminations, reconciliations and consolidation as well as payroll. For these areas, we either performed audit work ourselves, or directed and provided oversight of the audit work performed by PwC teams in the UK, Poland, China, Sri Lanka, Malaysia, India, Mexico and the Philippines. Some of this work was relied upon by the PwC teams auditing the Significant Subsidiaries. This audit work, together with analytical review procedures and assessing the outcome of local external audits, also mitigated the risk of material misstatement for balances in entities that were not part of a Significant Subsidiary.

Significant Subsidiaries audit approach

In March 2022, we held a meeting in Dubai with the partners and senior staff from the Group audit team and the PwC teams who undertake audits of the Significant Subsidiaries and the Operations Centres. The meeting focused primarily on reconnecting as a team after virtual interactions throughout the Covid-19 pandemic, reassessing our approach to auditing HSBC's businesses, changes at HSBC and in our PwC teams, and how we continue to innovate and improve the quality of the audit. We also discussed our significant audit risks.

We asked the partners and teams reporting to us on the Significant Subsidiaries to work to assigned materiality levels reflecting the size of the operations they audited. The performance materiality levels ranged from US$712m to US$50m. Certain Significant Subsidiaries were audited to a local statutory audit materiality that was a lower level than our allocated group materiality.

We designed global audit approaches for the products and services that substantially make up HSBC's global businesses, such as lending, deposits and derivatives. These approaches were provided to the partners and teams performing audit testing for the Significant Subsidiaries.

We were in active dialogue throughout the year with the partners and teams responsible for the audits of the Significant Subsidiaries, including consideration of how they planned and performed their work. Senior members of our team undertook at least one in-person site visit prior to the year end where a full scope audit was requested. We attended Audit Committee meetings for some of the Significant Subsidiaries. We also attended meetings with management for each of these Significant Subsidiaries at the year-end.

The audit of The Hongkong and Shanghai Banking Corporation Limited in Hong Kong relied upon work performed by other teams in Hong Kong and the PwC network firms in India, mainland China and Singapore. Similarly, the audit of HSBC Bank plc in the UK relied upon work performed by other teams in the UK and the PwC network firms in France and Germany. We considered how the audit partners and teams for the Significant Subsidiaries instructed and provided oversight to the work performed in these locations. Collectively, Significant Subsidiaries covered 84% of total assets and 69% of total operating income.

Using the work of others

We have increased our use of evidence provided by others through our reliance on management assurance testing of controls across the group. This included testing of controls performed by management themselves in certain low risk areas including reconciliations, footnote disclosure controls and certain automated controls. We re-performed a portion of the testing to ensure appropriate quality of testing, as well as assessing the competence and objectivity of those performing the testing.

We also used the work of PwC experts, for example economic experts for our work around the severity and probability weighting of macroeconomics variables as part of the expected credit loss allowance and actuaries on the estimates used in determining pension liabilities. An increasing number of controls are operated on behalf of HSBC by third parties. We obtained audit evidence from work that is scoped and provided by other auditors that are engaged by those third parties. For example, we obtained a report evidencing the testing of external systems and controls supporting HSBC's payroll and HR processes.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Financial statements – group	Financial statements – company
Overall materiality	US$1bn (2021: US$970m).	US$950m (2021: US$920m).
How we determined it	5% of adjusted profit before tax.	0.75% of total assets. This would result in an overall materiality of US$2bn and was therefore reduced below the group materiality.
Rationale for benchmark applied	We believe a standard benchmark of 5% of adjusted profit before tax is an appropriate qualitative indicator of materiality, although certain items could also be material for qualitative reasons. This benchmark is standard for listed entities and consistent with the wider industry. We selected adjusted profit because, as discussed on page 29, management believes it best reflects the performance of HSBC and how the group is run. We excluded the adjustments made by management on page 29 for certain customer redress programmes and fair value movements of financial instruments, as in our opinion they are recurring items that form part of ongoing business performance.	A benchmark of total assets has been used, as the company's primary purpose is to act as a holding company with investments in the group's subsidiaries, not to generate operating profits and therefore a profit based measure is not relevant.

We use performance materiality to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds overall materiality. Specifically, we use performance materiality in determining the scope of our audit and the nature and extent of our testing of account balances, classes of transactions and disclosures, for example in determining sample sizes. Our performance materiality was 75% (2021: 75%) of overall materiality, amounting to US$750m (2021: US$725m) for the group financial statements and US$712m (2021: US$690m) for the company financial statements.

In determining the performance materiality, we considered a number of factors - the history of misstatements, risk assessment and aggregation risk and the effectiveness of controls - and concluded that an amount at the upper end of our normal range was appropriate.

We agreed with the GAC that we would report to them misstatements identified during our audit above US$50m (group audit) (2021: US$48m) and US$50m (company audit) (2021: US$48m) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Conclusions relating to going concern

Our evaluation of the directors' assessment of the group's and the company's ability to continue to adopt the going concern basis of accounting included:

- performing a risk assessment to identify factors that could impact the going concern basis of accounting, including both internal risks (i.e. strategy execution) and external risks (i.e. macroeconomic conditions);
- understanding and evaluating the group's financial forecasts and the group's stress testing of liquidity and regulatory capital, including the severity of the stress scenarios that were used;
- understanding and evaluating credit rating agency ratings and actions; and
- reading and evaluating the adequacy of the disclosures made in the financial statements in relation to going concern.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's and the company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the group's and the company's ability to continue as a going concern.

In relation to the directors' reporting on how they have applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information.

Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Report of the Directors, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on our work undertaken in the course of the audit, the Companies Act 2006 requires us also to report certain opinions and matters as described below.

Strategic report and Report of the Directors

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Report of the Directors for the year ended 31 December 2022 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the group and company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Report of the Directors.

Directors' Remuneration

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Corporate governance statement

The Listing Rules require us to review the directors' statements in relation to going concern, longer-term viability and that part of the corporate governance statement relating to the company's compliance with the provisions of the UK Corporate Governance Code specified for our review. Our additional responsibilities with respect to the corporate governance statement as other information are described in the Reporting on other information section of this report.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the corporate governance statement is materially consistent with the financial statements and our knowledge obtained during the audit, and we have nothing material to add or draw attention to in relation to:

- the directors' confirmation that they have carried out an appropriate assessment of the emerging and principal risks;
- the disclosures in the Annual Report that describe those principal risks, what procedures are in place to identify emerging risks and an explanation of how these are being managed or mitigated;
- the directors' statement in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the group's and company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements;
- the directors' explanation as to their assessment of the group's and company's prospects, the period this assessment covers and why the period is appropriate; and
- the directors' statement as to whether they have a reasonable expectation that the company will be able to continue in operation and meet its liabilities as they fall due over the period of its assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Our review of the directors' statement regarding the longer-term viability of the group and company was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statement; checking that the statement is in alignment with the relevant provisions of the UK Corporate Governance Code; and considering whether the statement is consistent with the financial statements and our knowledge and understanding of the group and company and their environment obtained in the course of the audit.

In addition, based on the work undertaken as part of our audit, we have concluded that each of the following elements of the corporate governance statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- the directors' statement that they consider the Annual Report, taken as a whole, is fair, balanced and understandable, and provides the information necessary for the members to assess the group's and company's position, performance, business model and strategy;
- the section of the Annual Report that describes the review of effectiveness of risk management and internal control systems; and
- the section of the Annual Report describing the work of the GAC.

We have nothing to report in respect of our responsibility to report when the directors' statement relating to the company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified under the Listing Rules for review by the auditors.

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Directors' responsibility statement, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) and ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the group and industry, we identified that the principal risks of non-compliance with laws and regulations related to breaches of financial crime laws and regulations and regulatory compliance, including regulatory reporting requirements and conduct of business, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Companies Act 2006. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to posting inappropriate journal entries in relation to cost targets, and management bias in accounting estimates. The group engagement team shared this risk assessment with the component auditors so that they could include appropriate audit procedures in response to such risks in their work. Audit procedures performed by the group engagement team and/or component auditors included:

- review of correspondence with and reports from regulators, including the Prudential Regulation Authority ('PRA') and Financial Conduct Authority ('FCA');
- reviewed reporting to the GAC and GRC in respect of compliance and legal matters;
- enquiries of management and review of internal audit reports, insofar as they related to the financial statements;
- obtain legal confirmations from legal advisors relating to material litigation and compliance matters;
- assessment of matters reported on the group's whistleblowing programmes and the results of management's investigation of such matters, insofar as they related to the financial statements;
- challenging assumptions and judgements made by management in its significant accounting estimates, in particular in relation to the determination of expected credit losses, the impairment assessment of the investment in BoCom, valuation of defined benefit pensions obligations, investment in subsidiaries and valuation of financial instruments;
- obtaining confirmations from third parties to confirm the existence of a sample of transactions and balances; and
- identifying and testing journal entries, including those posted with certain descriptions, posted and approved by the same individual, backdated journals or posted by infrequent and unexpected users.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

Our audit testing might include testing complete populations of certain transactions and balances, possibly using data auditing techniques. However, it typically involves selecting a limited number of items for testing, rather than testing complete populations. We will often seek to target particular items for testing based on their size or risk characteristics. In other cases, we will use audit sampling to enable us to draw a conclusion about the population from which the sample is selected.

A further description of our responsibilities for the audit of the financial statements in accordance with ISAs (UK) is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

As part of an audit in accordance with ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and company's internal controls;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern;
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation; and
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group and company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group and company audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Use of this report

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other

purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not obtained all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the Group Audit Committee ('GAC'), we were appointed by the members on 31 March 2015 to audit the financial statements for the year ended 31 December 2015 and subsequent financial periods. The period of total uninterrupted engagement is eight years, covering the years ended 31 December 2015 to 31 December 2022.

Other matter

As required by the Financial Conduct Authority Disclosure Guidance and Transparency Rule 4.1.14R, these financial statements form part of the ESEF-prepared annual financial report filed on the National Storage Mechanism of the Financial Conduct Authority in accordance with the ESEF Regulatory Technical Standard ('ESEF RTS'). This auditors' report provides no assurance over whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS.

Scott Berryman (Senior Statutory Auditor)

for and on behalf of **PricewaterhouseCoopers LLP**

Chartered Accountants and Statutory Auditors

London

21 February 2023

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Consolidated income statement

for the year ended 31 December

	Notes*	**2022 $m**	2021 $m	2020 $m
Net interest income		**32,610**	26,489	27,578
– interest income[1,2]		**55,059**	36,188	41,756
– interest expense[3]		**(22,449)**	(9,699)	(14,178)
Net fee income	2	**11,451**	13,097	11,874
– fee income		**15,213**	16,788	15,051
– fee expense		**(3,762)**	(3,691)	(3,177)
Net income from financial instruments held for trading or managed on a fair value basis	3	**10,469**	7,744	9,582
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	3	**(3,394)**	4,053	2,081
Changes in fair value of designated debt and related derivatives[4]	3	**(77)**	(182)	231
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	3	**226**	798	455
Gains less losses from financial investments		**(3)**	569	653
Net insurance premium income	4	**12,825**	10,870	10,093
Impairment loss relating to the planned sale of our retail banking operations in France[5]		**(2,378)**	—	—
Other operating income/(loss)[6]		**(133)**	502	527
Total operating income		**61,596**	63,940	63,074
Net insurance claims and benefits paid and movement in liabilities to policyholders	4	**(9,869)**	(14,388)	(12,645)
Net operating income before change in expected credit losses and other credit impairment charges		**51,727**	49,552	50,429
Change in expected credit losses and other credit impairment charges		**(3,592)**	928	(8,817)
Net operating income		**48,135**	50,480	41,612
Employee compensation and benefits	5	**(18,366)**	(18,742)	(18,076)
General and administrative expenses		**(11,091)**	(11,592)	(11,115)
Depreciation and impairment of property, plant and equipment and right-of-use assets[7]		**(2,157)**	(2,261)	(2,681)
Amortisation and impairment of intangible assets		**(1,716)**	(1,438)	(2,519)
Goodwill impairment	21	**—**	(587)	(41)
Total operating expenses		**(33,330)**	(34,620)	(34,432)
Operating profit		**14,805**	15,860	7,180
Share of profit in associates and joint ventures	18	**2,723**	3,046	1,597
Profit before tax		**17,528**	18,906	8,777
Tax expense	7	**(858)**	(4,213)	(2,678)
Profit for the year		**16,670**	14,693	6,099
Attributable to:				
– ordinary shareholders of the parent company		**14,822**	12,607	3,898
– preference shareholders of the parent company		**—**	7	90
– other equity holders		**1,213**	1,303	1,241
– non-controlling interests		**635**	776	870
Profit for the year		**16,670**	14,693	6,099
		$	$	$
Basic earnings per ordinary share	9	**0.75**	0.62	0.19
Diluted earnings per ordinary share	9	**0.74**	0.62	0.19

* *For Notes on the financial statements, see page 335.*

1 *Interest income includes $48,134m (2021: $30,916m; 2020: $35,293m) of interest recognised on financial assets measured at amortised cost and $6,386m (2021: $4,337m; 2020: $5,614m) of interest recognised on financial assets measured at fair value through other comprehensive income.*

2 *Interest income is calculated using the effective interest method and comprises interest recognised on financial assets measured at either amortised cost or fair value through other comprehensive income.*

3 *Interest expense includes $20,798m (2021: $8,227m; 2020: $12,426m) of interest on financial instruments, excluding interest on financial liabilities held for trading or designated or otherwise mandatorily measured at fair value.*

4 *The debt instruments, issued for funding purposes, are designated under the fair value option to reduce an accounting mismatch.*

5 *Includes impairment of goodwill of $425m.*

6 *Other operating income includes a loss on net monetary positions of $678m (2021: $224m, 2020: $128m) as a result of applying IAS 29 'Financial Reporting in Hyperinflationary Economies'.*

7 *Includes depreciation of the right-of-use assets of $723m (2021: $878m; 2020: $1,029m).*

Consolidated statement of comprehensive income

for the year ended 31 December

	2022	2021	2020
	$m	$m	$m
Profit for the year	**16,670**	14,693	6,099
Other comprehensive income/(expense)			
Items that will be reclassified subsequently to profit or loss when specific conditions are met:			
Debt instruments at fair value through other comprehensive income	**(5,468)**	(2,139)	1,750
– fair value gains/(losses)	**(7,261)**	(2,270)	2,947
– fair value gains transferred to the income statement on disposal	**(20)**	(464)	(668)
– expected credit (recoveries)/losses recognised in the income statement	**67**	(49)	48
– income taxes	**1,746**	644	(577)
Cash flow hedges	**(3,655)**	(664)	471
– fair value gains/(losses)	**(4,207)**	595	(157)
– fair value (gains)/losses reclassified to the income statement	**(758)**	(1,514)	769
– income taxes	**1,310**	255	(141)
Share of other comprehensive income/(expense) of associates and joint ventures	**(367)**	103	(73)
– share for the year	**(367)**	103	(73)
Exchange differences	**(9,931)**	(2,393)	4,855
Items that will not be reclassified subsequently to profit or loss:			
Fair value gains on property revaluation	**280**	—	—
Remeasurement of defined benefit asset/liability	**(1,031)**	(274)	834
– before income taxes	**(1,723)**	(107)	1,223
– income taxes	**692**	(167)	(389)
Changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	**1,922**	531	167
– before income taxes	**2,573**	512	190
– income taxes	**(651)**	19	(23)
Equity instruments designated at fair value through other comprehensive income	**107**	(446)	212
– fair value gains/(losses)	**107**	(443)	212
– income taxes	**—**	(3)	—
Effects of hyperinflation	**842**	315	193
Other comprehensive income/(expense) for the year, net of tax	**(17,301)**	(4,967)	8,409
Total comprehensive income/(expense) for the year	**(631)**	9,726	14,508
Attributable to:			
– ordinary shareholders of the parent company	**(2,393)**	7,765	12,146
– preference shareholders of the parent company	**—**	7	90
– other equity holders	**1,213**	1,303	1,241
– non-controlling interests	**549**	651	1,031
Total comprehensive income/(expense) for the year	**(631)**	9,726	14,508

Consolidated balance sheet

	Notes*	At 31 Dec 2022 $m	31 Dec 2021 $m
Assets			
Cash and balances at central banks		**327,002**	403,018
Items in the course of collection from other banks		**7,297**	4,136
Hong Kong Government certificates of indebtedness		**43,787**	42,578
Trading assets	11	**218,093**	248,842
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	14	**45,063**	49,804
Derivatives	15	**284,146**	196,882
Loans and advances to banks		**104,882**	83,136
Loans and advances to customers		**924,854**	1,045,814
Reverse repurchase agreements – non-trading		**253,754**	241,648
Financial investments	16	**425,564**	446,274
Assets held for sale[1]	23	**115,919**	3,411
Prepayments, accrued income and other assets	22	**156,866**	136,571
Current tax assets		**1,230**	970
Interests in associates and joint ventures	18	**29,254**	29,609
Goodwill and intangible assets	21	**21,321**	20,622
Deferred tax assets	7	**7,498**	4,624
Total assets		**2,966,530**	2,957,939
Liabilities and equity			
Liabilities			
Hong Kong currency notes in circulation		**43,787**	42,578
Deposits by banks		**66,722**	101,152
Customer accounts		**1,570,303**	1,710,574
Repurchase agreements – non-trading		**127,747**	126,670
Items in the course of transmission to other banks		**7,864**	5,214
Trading liabilities	24	**72,353**	84,904
Financial liabilities designated at fair value	25	**127,327**	145,502
Derivatives	15	**285,764**	191,064
Debt securities in issue	26	**78,149**	78,557
Liabilities of disposal groups held for sale[1]	23	**114,597**	9,005
Accruals, deferred income and other liabilities	27	**133,240**	114,773
Current tax liabilities		**1,135**	698
Liabilities under insurance contracts	4	**114,844**	112,745
Provisions	28	**1,958**	2,566
Deferred tax liabilities	7	**2,422**	4,673
Subordinated liabilities	29	**22,290**	20,487
Total liabilities		**2,770,502**	2,751,162
Equity			
Called up share capital	32	**10,147**	10,316
Share premium account	32	**14,664**	14,602
Other equity instruments		**19,746**	22,414
Other reserves		**(9,141)**	6,460
Retained earnings		**152,068**	144,458
Total shareholders' equity		**187,484**	198,250
Non-controlling interests	19	**8,544**	8,527
Total equity		**196,028**	206,777
Total liabilities and equity		**2,966,530**	2,957,939

1 *'Assets held for sale' in 2021, including $2.4bn of loans and advances to customers in relation to our exit of mass market retail banking business in the US, were reported within 'Prepayments, accrued income and other assets' in the* Annual Report and Accounts 2021. *Similarly, $8.8bn of customer accounts classified as 'Liabilities of disposal groups' were previously presented within 'Accruals, deferred income and other liabilities'.*

* *For Notes on the financial statements, see page 335.*

The accompanying notes on pages 335 to 417 and the audited sections in the Risk review on pages 131 to 238 (including 'Measurement uncertainty and sensitivity analysis of ECL estimates' on pages 153 to 162, and 'Directors' remuneration report' on pages 276 to 301 form an integral part of these financial statements.

These financial statements were approved by the Board of Directors on 21 February 2023 and signed on its behalf by:

Mark E Tucker
Group Chairman

Georges Elhedery
Group Chief Financial Officer

Consolidated statement of cash flows
for the year ended 31 December

	2022 $m	2021 $m	2020 $m
Profit before tax	**17,528**	18,906	8,777
Adjustments for non-cash items:			
Depreciation, amortisation and impairment	**3,873**	4,286	5,241
Net loss/(gain) from investing activities	**11**	(647)	(541)
Share of profits in associates and joint ventures	**(2,723)**	(3,046)	(1,597)
Loss on disposal of subsidiaries, businesses, associates and joint ventures	**2,639**	—	—
Change in expected credit losses gross of recoveries and other credit impairment charges	**3,907**	(519)	9,096
Provisions including pensions	**635**	1,063	1,164
Share-based payment expense	**400**	467	433
Other non-cash items included in profit before tax	**(1,084)**	510	(906)
Elimination of exchange differences[1]	**49,127**	18,937	(25,749)
Changes in operating assets and liabilities			
Change in net trading securities and derivatives	**20,181**	(9,226)	13,150
Change in loans and advances to banks and customers	**31,799**	(11,014)	(14,131)
Change in reverse repurchase agreements – non-trading	**(23,405)**	552	9,950
Change in financial assets designated and otherwise mandatorily measured at fair value	**8,344**	(4,254)	(1,962)
Change in other assets	**(10,771)**	19,899	(19,610)
Change in deposits by banks and customer accounts	**(91,194)**	95,703	226,723
Change in repurchase agreements – non-trading	**4,344**	14,769	(28,443)
Change in debt securities in issue	**12,518**	(16,936)	(9,075)
Change in financial liabilities designated at fair value	**(13,647)**	(11,425)	(6,630)
Change in other liabilities	**15,978**	(10,935)	20,323
Dividends received from associates	**944**	808	761
Contributions paid to defined benefit plans	**(194)**	(509)	(495)
Tax paid	**(2,776)**	(3,077)	(4,259)
Net cash from operating activities	**26,434**	104,312	182,220
Purchase of financial investments	**(520,600)**	(493,042)	(496,669)
Proceeds from the sale and maturity of financial investments	**495,049**	521,190	476,990
Net cash flows from the purchase and sale of property, plant and equipment	**(1,285)**	(1,086)	(1,446)
Net cash flows from purchase/(disposal) of customer and loan portfolios	**(3,530)**	3,059	1,362
Net investment in intangible assets	**(3,125)**	(2,479)	(2,064)
Net cash flow from acquisition and disposal of subsidiaries, businesses, associates and joint ventures	**(989)**	(106)	(603)
Net cash from investing activities	**(34,480)**	27,536	(22,430)
Issue of ordinary share capital and other equity instruments	**—**	1,996	1,497
Cancellation of shares	**(2,285)**	(707)	—
Net purchases of own shares for market-making and investment purposes	**(91)**	(1,386)	(181)
Net cash flow from change in stake of subsidiaries	**(197)**	—	—
Redemption of preference shares and other equity instruments	**(2,266)**	(3,450)	(398)
Subordinated loan capital issued	**7,300**	—	—
Subordinated loan capital repaid[2]	**(1,777)**	(864)	(3,538)
Dividends paid to shareholders of the parent company and non-controlling interests	**(6,970)**	(6,383)	(2,023)
Net cash from financing activities	**(6,286)**	(10,794)	(4,643)
Net increase/(decrease) in cash and cash equivalents	**(14,332)**	121,054	155,147
Cash and cash equivalents at 1 Jan	**574,032**	468,323	293,742
Exchange differences in respect of cash and cash equivalents	**(38,029)**	(15,345)	19,434
Cash and cash equivalents at 31 Dec[3]	**521,671**	574,032	468,323
Cash and cash equivalents comprise:			
– cash and balances at central banks	**327,002**	403,018	304,481
– items in the course of collection from other banks	**7,297**	4,136	4,094
– loans and advances to banks of one month or less	**72,295**	55,705	51,788
– reverse repurchase agreements with banks of one month or less	**68,682**	76,658	65,086
– treasury bills, other bills and certificates of deposit less than three months	**26,727**	28,488	30,023
– cash collateral and net settlement accounts	**19,445**	11,241	17,194
– cash and cash equivalents held for sale[4]	**8,087**	—	—
– less: items in the course of transmission to other banks	**(7,864)**	(5,214)	(4,343)
Cash and cash equivalents at 31 Dec[3]	**521,671**	574,032	468,323

Interest received was $55,664m (2021: $40,175m; 2020: $45,578m), interest paid was $22,856m (2021: $12,695m; 2020: $17,440m) and dividends received (excluding dividends received from associates, which are presented separately above) were $1,638m (2021: $1,898m; 2020: $1,158m).

1 *Adjustment to bring changes between opening and closing balance sheet amounts to average rates. This is not done on a line-by-line basis, as details cannot be determined without unreasonable expense.*

2 *Subordinated liabilities changes during the year are attributable to repayments of $(1.8)bn (2021: $(0.9)bn; 2020: $(3.5)bn) of securities. Non-cash changes during the year included foreign exchange gains/(losses) of $(1.1)bn (2021: $(0.3)bn; 2020: $0.5bn) and fair value gains/(losses) of $(3.1)bn (2021: $(1.0)bn; 2020: $1.1bn).*

3 *At 31 December 2022, $59.3bn (2021: $33.6bn; 2020: $41.9bn) was not available for use by HSBC, due to a range of restrictions, including currency exchange and other restrictions, of which $22.1bn (2021: $15.4bn; 2020: $16.9bn) related to mandatory deposits at central banks.*

4 *Includes $6.5bn of cash and balances at central banks (excluding the expected cash contribution as part of the planned sale of our retail banking operations in France. For further details, see Note 23); $1.3bn of reverse repurchase agreements with banks of one month or less and $0.2bn of loans and advances to banks of one month or less.*

Consolidated statement of changes in equity

for the year ended 31 December

	Called up share capital and share premium	Other equity instru-ments	Retained earnings[3,4]	Other reserves: Financial assets at FVOCI reserve	Other reserves: Cash flow hedging reserve	Other reserves: Foreign exchange reserve	Other reserves: Merger and other reserves[4,5]	Total share-holders' equity	Non-controlling interests	Total equity
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**24,918**	**22,414**	**144,458**	**(634)**	**(197)**	**(22,769)**	**30,060**	**198,250**	**8,527**	**206,777**
Profit for the year	—	—	**16,035**	—	—	—	—	**16,035**	**635**	**16,670**
Other comprehensive income (net of tax)	—	—	**1,368**	**(5,325)**	**(3,613)**	**(9,819)**	**174**	**(17,215)**	**(86)**	**(17,301)**
– debt instruments at fair value through other comprehensive income	—	—	—	**(5,417)**	—	—	—	**(5,417)**	**(51)**	**(5,468)**
– equity instruments designated at fair value through other comprehensive income	—	—	—	**92**	—	—	—	**92**	**15**	**107**
– cash flow hedges	—	—	—	—	**(3,613)**	—	—	**(3,613)**	**(42)**	**(3,655)**
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	—	—	**1,922**	—	—	—	—	**1,922**	—	**1,922**
– property revaluation	—	—	—	—	—	—	**174**	**174**	**106**	**280**
– remeasurement of defined benefit asset/liability	—	—	**(1,029)**	—	—	—	—	**(1,029)**	**(2)**	**(1,031)**
– share of other comprehensive income of associates and joint ventures	—	—	**(367)**	—	—	—	—	**(367)**	—	**(367)**
– effects of hyperinflation	—	—	**842**	—	—	—	—	**842**	—	**842**
– exchange differences	—	—	—	—	—	**(9,819)**	—	**(9,819)**	**(112)**	**(9,931)**
Total comprehensive income for the year	—	—	**17,403**	**(5,325)**	**(3,613)**	**(9,819)**	**174**	**(1,180)**	**549**	**(631)**
Shares issued under employee remuneration and share plans	**67**	—	**(67)**	—	—	—	—	—	—	—
Dividends to shareholders	—	—	**(6,544)**	—	—	—	—	**(6,544)**	**(426)**	**(6,970)**
Redemption of securities[2]	—	**(2,668)**	**402**	—	—	—	—	**(2,266)**	—	**(2,266)**
Transfers[6]	—	—	**(2,499)**	—	—	—	**2,499**	—	—	—
Cost of share-based payment arrangements	—	—	**400**	—	—	—	—	**400**	—	**400**
Cancellation of shares[7]	**(174)**	—	**(1,000)**	—	—	—	**174**	**(1,000)**	—	**(1,000)**
Other movements	—	—	**(485)**	**3**	**2**	—	**304**	**(176)**	**(106)**	**(282)**
At 31 Dec 2022	**24,811**	**19,746**	**152,068**	**(5,956)**	**(3,808)**	**(32,588)**	**33,211**	**187,484**	**8,544**	**196,028**

Consolidated statement of changes in equity (continued)

for the year ended 31 December

	Called up share capital and share premium	Other equity instru-ments	Retained earnings[3,4]	Other reserves: Financial assets at FVOCI reserve	Other reserves: Cash flow hedging reserve	Other reserves: Foreign exchange reserve	Other reserves: Merger and other reserves[4,5]	Total share-holders' equity	Non-controlling interests	Total equity
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2021	24,624	22,414	140,572	1,816	457	(20,375)	26,935	196,443	8,552	204,995
Profit for the year	—	—	13,917	—	—	—	—	13,917	776	14,693
Other comprehensive income (net of tax)	—	—	661	(2,455)	(654)	(2,394)	—	(4,842)	(125)	(4,967)
– debt instruments at fair value through other comprehensive income	—	—	—	(2,105)	—	—	—	(2,105)	(34)	(2,139)
– equity instruments designated at fair value through other comprehensive income	—	—	—	(350)	—	—	—	(350)	(96)	(446)
– cash flow hedges	—	—	—	—	(654)	—	—	(654)	(10)	(664)
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	—	—	531	—	—	—	—	531	—	531
– remeasurement of defined benefit asset/liability	—	—	(288)	—	—	—	—	(288)	14	(274)
– share of other comprehensive income of associates and joint ventures	—	—	103	—	—	—	—	103	—	103
– effects of hyperinflation	—	—	315	—	—	—	—	315	—	315
– exchange differences	—	—	—	—	—	(2,394)	—	(2,394)	1	(2,393)
Total comprehensive income for the year	—	—	14,578	(2,455)	(654)	(2,394)	—	9,075	651	9,726
Shares issued under employee remuneration and share plans	354	—	(336)	—	—	—	—	18	—	18
Capital securities issued[1]	—	2,000	(4)	—	—	—	—	1,996	—	1,996
Dividends to shareholders	—	—	(5,790)	—	—	—	—	(5,790)	(593)	(6,383)
Redemption of securities[2]	—	(2,000)	—	—	—	—	—	(2,000)	—	(2,000)
Transfers[6]	—	—	(3,065)	—	—	—	3,065	—	—	—
Cost of share-based payment arrangements	—	—	467	—	—	—	—	467	—	467
Cancellation of shares[7]	(60)	—	(2,004)	—	—	—	60	(2,004)	—	(2,004)
Other movements	—	—	40	5	—	—	—	45	(83)	(38)
At 31 Dec 2021	24,918	22,414	144,458	(634)	(197)	(22,769)	30,060	198,250	8,527	206,777

Consolidated statement of changes in equity (continued)

for the year ended 31 December

	Called up share capital and share premium	Other equity instru-ments	Retained earnings[3,4]	Other reserves: Financial assets at FVOCI reserve	Other reserves: Cash flow hedging reserve	Other reserves: Foreign exchange reserve	Other reserves: Merger and other reserves[4,5]	Total share-holders' equity	Non-controlling interests	Total equity
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2020	24,278	20,871	136,679	(108)	(2)	(25,133)	27,370	183,955	8,713	192,668
Profit for the year	—	—	5,229	—	—	—	—	5,229	870	6,099
Other comprehensive income (net of tax)	—	—	1,118	1,913	459	4,758	—	8,248	161	8,409
– debt instruments at fair value through other comprehensive income	—	—	—	1,746	—	—	—	1,746	4	1,750
– equity instruments designated at fair value through other comprehensive income	—	—	—	167		—	—	167	45	212
– cash flow hedges	—	—	—	—	459	—	—	459	12	471
– changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	—	—	167	—	—	—	—	167	—	167
– remeasurement of defined benefit asset/liability	—	—	831	—	—	—	—	831	3	834
– share of other comprehensive income of associates and joint ventures	—	—	(73)	—	—	—	—	(73)	—	(73)
– effects of hyperinflation	—	—	193	—	—	—	—	193	—	193
– exchange differences	—	—	—	—	—	4,758	—	4,758	97	4,855
Total comprehensive income for the year	—	—	6,347	1,913	459	4,758	—	13,477	1,031	14,508
Shares issued under employee remuneration and share plans	346	—	(339)	—	—	—	—	7	—	7
Capital securities issued[1]	—	1,500	(3)	—	—	—	—	1,497	—	1,497
Dividends to shareholders	—	—	(1,331)	—	—	—	—	(1,331)	(692)	(2,023)
Redemption of securities[2]	—	—	(1,450)	—	—	—	—	(1,450)	—	(1,450)
Transfers[6]	—	—	435	—	—	—	(435)	—	—	—
Cost of share-based payment arrangements	—	—	434	—	—	—	—	434	—	434
Other movements	—	43	(200)	11	—	—	—	(146)	(500)	(646)
At 31 Dec 2020	24,624	22,414	140,572	1,816	457	(20,375)	26,935	196,443	8,552	204,995

1 *In 2021, HSBC Holdings issued $2,000m of additional tier 1 instruments on which there were $4m of external issue costs. In 2020, HSBC Holdings issued $1,500m of additional tier 1 instruments.*

2 *During 2022, HSBC Holdings redeemed €1,500m 5.250% perpetual subordinated contingent convertible capital securities and SGD1,000m 5.875% perpetual subordinated contingent convertible capital securities. For further details, see Note 32. In 2021, HSBC Holdings redeemed $2,000m 6.875% perpetual subordinated contingent convertible capital securities. In 2020, HSBC Holdings called and later redeemed $1,450m 6.20% non-cumulative US dollar preference shares.*

3 *At 31 December 2022, retained earnings included 554,452,437 treasury shares (2021: 558,397,704; 2020: 509,825,249). These include treasury shares held within HSBC's insurance business's retirement funds for the benefit of policyholders or beneficiaries within employee trusts for the settlement of shares expected to be delivered under employee share schemes or bonus plans, and the market-making activities in Markets and Securities Services.*

4 *Cumulative goodwill amounting to $5,138m has been charged against reserves in respect of acquisitions of subsidiaries prior to 1 January 1998, including $3,469m charged against the merger reserve arising on the acquisition of HSBC Bank plc. The balance of $1,669m has been charged against retained earnings.*

5 *Statutory share premium relief under section 131 of the Companies Act 1985 was taken in respect of the acquisition of HSBC Bank plc in 1992, HSBC Continental Europe in 2000 and HSBC Finance Corporation in 2003, and the shares issued were recorded at their nominal value only. In HSBC's consolidated financial statements, the fair value differences of $8,290m in respect of HSBC Continental Europe and $12,768m in respect of HSBC Finance Corporation were recognised in the merger reserve. The merger reserve created on the acquisition of HSBC Finance Corporation subsequently became attached to HSBC Overseas Holdings (UK) Limited, following a number of intra-Group reorganisations. During 2009, pursuant to section 131 of the Companies Act 1985, statutory share premium relief was taken in respect of the rights issue and $15,796m was recognised in the merger reserve.*

6 *Permitted transfers from the merger reserve to retained earnings were made when the investment in HSBC Overseas Holdings (UK) Limited was previously impaired. In 2020, an impairment of $435m was recognised and a permitted transfer of this amount was made from the merger reserve to retained earnings. During 2022 and 2021, part-reversals of these impairments resulted in transfers from retained earnings back to the merger reserve of $2,499m and $3,065m respectively.*

7 *For further details, see Note 32. In October 2021, HSBC announced a share buy-back of up to $2.0bn, which was completed in April 2022. Additionally, HSBC announced a share buy-back of up to $1.0bn in February 2022, which concluded on 28 July 2022.*

HSBC Holdings income statement

for the year ended 31 December

	Notes*	2022 $m	2021 $m	2020 $m
Net interest expense		**(3,074)**	(2,367)	(2,632)
– interest income		**937**	380	473
– interest expense		**(4,011)**	(2,747)	(3,105)
Fee (expense)/income		**(3)**	(5)	(12)
Net income from financial instruments held for trading or managed on a fair value basis	3	**2,129**	110	801
Changes in fair value of designated debt and related derivatives[1]	3	**2,144**	349	(326)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	3	**(2,409)**	(420)	1,141
Gains less losses from financial investments		**58**	—	—
Dividend income from subsidiaries		**9,478**	11,404	8,156
Other operating income		**91**	230	1,889
Total operating income		**8,414**	9,301	9,017
Employee compensation and benefits	5	**(41)**	(30)	(56)
General and administrative expenses		**(1,586)**	(1,845)	(4,276)
Reversal of impairment/(impairment) of subsidiaries		**2,493**	3,065	(435)
Total operating expenses		**866**	1,190	(4,767)
Profit before tax		**9,280**	10,491	4,250
Tax (charge)/credit[2]		**3,077**	343	(165)
Profit for the year		**12,357**	10,834	4,085

* *For Notes on the financial statements, see page 335.*

1 *The debt instruments, issued for funding purposes, are designated under the fair value option to reduce an accounting mismatch.*

2 *The tax credit includes $2.2bn arising from the recognition of a deferred tax asset from historical tax losses in HSBC Holdings. This was a result of improved profit forecasts for the UK tax group, which accelerated the expected utilisation of these losses and reduced uncertainty regarding their recoverability. The amounts recorded within profit before tax with respect to dividend income from subsidiaries and reversal of impairment of subsidiaries are not subject to tax.*

HSBC Holdings statement of comprehensive income

for the year ended 31 December

	2022 $m	2021 $m	2020 $m
Profit for the year	**12,357**	10,834	4,085
Other comprehensive income/(expense)			
Items that will not be reclassified subsequently to profit or loss:			
Changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	**326**	267	176
– before income taxes	**435**	259	176
– income taxes	**(109)**	8	—
Other comprehensive income/(expense) for the year, net of tax	**326**	267	176
Total comprehensive income for the year	**12,683**	11,101	4,261

HSBC Holdings balance sheet

	Notes*	31 Dec 2022 $m	31 Dec 2021 $m
Assets			
Cash and balances with HSBC undertakings		**3,210**	2,590
Financial assets with HSBC undertakings designated and otherwise mandatorily measured at fair value		**52,322**	51,408
Derivatives	15	**3,801**	2,811
Loans and advances to HSBC undertakings		**26,765**	25,108
Financial investments		**19,466**	26,194
Prepayments, accrued income and other assets		**5,242**	1,513
Current tax assets		**464**	122
Investments in subsidiaries		**167,542**	163,211
Intangible assets		**189**	215
Deferred tax assets		**2,100**	—
Total assets at 31 Dec		**281,101**	273,172
Liabilities and equity			
Liabilities			
Amounts owed to HSBC undertakings		**314**	111
Financial liabilities designated at fair value	25	**32,123**	32,418
Derivatives	15	**6,922**	1,220
Debt securities in issue	26	**66,938**	67,483
Accruals, deferred income and other liabilities		**1,969**	4,240
Subordinated liabilities	29	**19,727**	17,059
Deferred tax liabilities		**—**	311
Total liabilities		**127,993**	122,842
Equity			
Called up share capital	32	**10,147**	10,316
Share premium account		**14,664**	14,602
Other equity instruments		**19,746**	22,414
Merger and other reserves		**40,555**	37,882
Retained earnings		**67,996**	65,116
Total equity		**153,108**	150,330
Total liabilities and equity at 31 Dec		**281,101**	273,172

* *For Notes on the financial statements, see page 335.*

The accompanying notes on pages 335 to 417 and the audited sections in the Risk review on pages 131 to 238 (including 'Measurement uncertainty and sensitivity analysis of ECL estimates' on pages 153 to 162), and 'Directors' remuneration report' on pages 276 to 301 form an integral part of these financial statements.

These financial statements were approved by the Board of Directors on 21 February 2023 and signed on its behalf by:

Mark E Tucker
Group Chairman

Georges Elhedery
Group Chief Financial Officer

HSBC Holdings statement of cash flows

for the year ended 31 December

	2022	2021	2020
	$m	$m	$m
Profit before tax	**9,280**	10,491	4,250
Adjustments for non-cash items	**(2,500)**	(2,954)	442
– depreciation, amortisation and impairment/expected credit losses	**(2,428)**	(2,976)	87
– share-based payment expense	**1**	2	1
– other non-cash items included in profit before tax	**(73)**	20	354
Changes in operating assets and liabilities			
Change in loans to HSBC undertakings	**(1,657)**	3,364	(327)
Change in financial assets with HSBC undertakings designated and otherwise mandatorily measured at fair value	**(914)**	(4,409)	(3,289)
Change in net trading securities and net derivatives	**4,712**	47	(1,657)
Change in other assets	**51**	(226)	(633)
Change in financial investments	**196**	20	449
Change in debt securities in issue	**(5,625)**	(2,833)	3,063
Change in financial liabilities designated at fair value	**(4,755)**	(1,396)	1,258
Change in other liabilities	**(3,394)**	(691)	1,366
Tax received	**215**	32	270
Net cash from operating activities	**(4,391)**	1,445	5,192
Purchase of financial investments	**(21,481)**	(16,966)	(11,652)
Proceeds from the sale and maturity of financial investments	**17,165**	16,074	9,342
Net cash outflow from acquisition of or increase in stake of subsidiaries	**(5,696)**	(1,337)	(2,558)
Repayment of capital from subsidiaries	**3,860**	2,000	1,516
Net investment in intangible assets	**(39)**	(26)	(33)
Net cash from investing activities	**(6,191)**	(255)	(3,385)
Issue of ordinary share capital and other equity instruments	**67**	2,334	1,846
Redemption of preference shares and other equity instruments	**(2,266)**	(3,450)	—
Purchase of treasury shares	**(438)**	(28)	—
Cancellation of shares	**(2,298)**	(707)	—
Subordinated loan capital issued	**7,300**	—	—
Subordinated loan capital repaid	**—**	—	(1,500)
Debt securities issued	**18,076**	19,379	15,951
Debt securities repaid	**(10,094)**	(5,569)	(16,577)
Dividends paid on ordinary shares	**(5,330)**	(4,480)	—
Dividends paid to holders of other equity instruments	**(1,214)**	(1,310)	(1,331)
Net cash from financing activities	**3,803**	6,169	(1,611)
Net increase/(decrease) in cash and cash equivalents	**(6,779)**	7,359	196
Cash and cash equivalents at 1 January	**13,535**	6,176	5,980
Cash and cash equivalents at 31 Dec	**6,756**	13,535	6,176
Cash and cash equivalents comprise:			
– cash at bank with HSBC undertakings	**3,210**	2,590	2,913
– cash collateral and net settlement accounts	**3,544**	93	249
– treasury and other eligible bills	**2**	10,852	3,014

Interest received was $2,410m (2021: $1,636m; 2020: $1,952m), interest paid was $3,813m (2021: $2,724m; 2020: $3,166m) and dividends received were $9,478m (2021: $11,404m; 2020: $8,156m).

HSBC Holdings statement of changes in equity

for the year ended 31 December

	Called up share capital $m	Share premium $m	Other equity instruments $m	Retained earnings[1] $m	Other reserves: Merger and other reserves $m	Total shareholders' equity $m
At 1 Jan 2022	**10,316**	**14,602**	**22,414**	**65,116**	**37,882**	**150,330**
Profit for the year	**—**	**—**	**—**	**12,357**	**—**	**12,357**
Other comprehensive income (net of tax)	**—**	**—**	**—**	**326**	**—**	**326**
– changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	**—**	**—**	**—**	**326**	**—**	**326**
Total comprehensive income for the year	**—**	**—**	**—**	**12,683**	**—**	**12,683**
Shares issued under employee share plans	**5**	**62**	**—**	**(161)**	**—**	**(94)**
Capital securities issued	**—**	**—**	**—**	**—**	**—**	**—**
Cancellation of shares[2,3]	**(174)**	**—**	**—**	**(1,001)**	**174**	**(1,001)**
Dividends to shareholders	**—**	**—**	**—**	**(6,544)**	**—**	**(6,544)**
Redemption of capital securities	**—**	**—**	**(2,668)**	**402**	**—**	**(2,266)**
Transfers[4]	**—**	**—**	**—**	**(2,499)**	**2,499**	**—**
Other movements	**—**	**—**	**—**	**—**	**—**	**—**
At 31 Dec 2022	**10,147**	**14,664**	**19,746**	**67,996**	**40,555**	**153,108**
At 1 Jan 2021	10,347	14,277	22,414	65,005	34,757	146,800
Profit for the year	—	—	—	10,834	—	10,834
Other comprehensive income (net of tax)	—	—	—	267	—	267
– changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	—	—	—	267	—	267
Total comprehensive income for the year	—	—	—	11,101	—	11,101
Shares issued under employee share plans	29	325	—	(103)	—	251
Capital securities issued	—	—	2,000	(20)	—	1,980
Cancellation of shares[2]	(60)	—	—	(2,004)	60	(2,004)
Dividends to shareholders	—	—	—	(5,790)	—	(5,790)
Redemption of capital securities	—	—	(2,000)	—	—	(2,000)
Transfers[4]	—	—	—	(3,065)	3,065	—
Other movements	—	—	—	(8)	—	(8)
At 31 Dec 2021	10,316	14,602	22,414	65,116	37,882	150,330
At 1 Jan 2020	10,319	13,959	20,743	62,484	37,539	145,044
Profit for the year	—	—	—	4,085	—	4,085
Other comprehensive income (net of tax)	—	—	—	176	—	176
– changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	—	—	—	176	—	176
Total comprehensive income for the year	—	—	—	4,261	—	4,261
Shares issued under employee share plans	28	318	—	2,540	(2,347)	539
Capital securities issued	—	—	1,500	(15)	—	1,485
Dividends to shareholders	—	—	—	(1,331)	—	(1,331)
Redemption of capital securities	—	—	—	(1,450)	—	(1,450)
Transfers[4]	—	—	—	435	(435)	—
Other movements[5]	—	—	171	(1,919)	—	(1,748)
At 31 Dec 2020	10,347	14,277	22,414	65,005	34,757	146,800

Dividends per ordinary share at 31 December 2022 were $0.27 (2021: $0.22; 2020: nil).

1 *At 31 December 2022, retained earnings included 331,874,221 ($2,615m) treasury shares (2021: 329,871,829 ($2,542m); 2020: 326,766,253 ($2,521m)).*
2 *On 26 October 2021, HSBC announced a share buy-back of up to $2.0bn, which was completed on 20 April 2022.*
3 *On 3 May 2022, HSBC announced a share buy-back of up to $1.0bn, which was completed on 28 July 2022.*
4 *Permitted transfers from the merger reserve to retained earnings were made when the investment in HSBC Overseas Holdings (UK) Limited was previously impaired. In 2022, a part-reversal of this impairment resulted in a transfer from retained earnings back to the merger reserve of $2,499m (2021: $3,065m). At 31 December 2020, an additional impairment of $435m was recognised and a permitted transfer of this amount was made from the merger reserve to retained earnings.*
5 *Includes an adjustment to retained earnings for a repayment of capital by a subsidiary of $1,650m, which had been recognised as dividend income in 2019.*

Notes on the financial statements

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1 Basis of preparation and significant accounting policies

1.1 Basis of preparation

(a) Compliance with International Financial Reporting Standards

The consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings comply with UK-adopted international accounting standards and with the requirements of the Companies Act 2006, and have also applied international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union. These financial statements are also prepared in accordance with International Financial Reporting Standards ('IFRSs') as issued by the International Accounting Standards Board ('IASB'), including interpretations issued by the IFRS Interpretations Committee, as there are no applicable differences from IFRSs as issued by the IASB for the periods presented. There were no unendorsed standards effective for the year ended 31 December 2022 affecting these consolidated and separate financial statements.

Standards adopted during the year ended 31 December 2022

There were no new accounting standards or interpretations that had a significant effect on HSBC in 2022. Accounting policies have been consistently applied.

(b) Differences between IFRSs and Hong Kong Financial Reporting Standards

There are no significant differences between IFRSs and Hong Kong Financial Reporting Standards in terms of their application to HSBC, and consequently there would be no significant differences had the financial statements been prepared in accordance with Hong Kong Financial Reporting Standards. The 'Notes on the financial statements', taken together with the 'Report of the Directors', include the aggregate of all disclosures necessary to satisfy IFRSs and Hong Kong reporting requirements.

(c) Future accounting developments

Minor amendments to IFRSs

The IASB has not published any minor amendments effective from 1 January 2022 that are applicable to HSBC. However, the IASB has published a number of minor amendments to IFRSs that are effective from 1 January 2023 and 1 January 2024. HSBC expects they will have an insignificant effect, when adopted, on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

New IFRSs

IFRS 17 'Insurance Contracts'

IFRS 17 'Insurance Contracts' was issued in May 2017, with amendments to the standard issued in June 2020 and December 2021. Following the amendments, IFRS 17 is effective for annual reporting periods beginning on or after 1 January 2023 and is applied retrospectively, with comparatives restated from 1 January 2022. IFRS 17 has been adopted in its entirety for use in the UK while it has been adopted by the EU subject to certain optional exemptions.

IFRS 17 sets out the requirements that the Group will apply in accounting for insurance contracts it issues, reinsurance contracts it holds, and investment contracts with discretionary participation features.

The Group is at an advanced stage in the implementation of IFRS 17, having put in place accounting policies, data and models, and made progress with preparing 2022 comparative data. We set out below our expectations of the impact of IFRS 17 compared with our current accounting policy for insurance contracts, which is set out in Note 1.2(j) on page 344.

Under IFRS 17, no present value of in-force business ('PVIF') asset is recognised. Instead, the measurement of the insurance contracts liability is based on groups of insurance contracts and will include fulfilment cash flows, as well as the contractual service margin ('CSM'), which represents the unearned profit.

To identify groups of insurance contracts, individual contracts subject to similar dominant risk and managed together are identified as a portfolio of insurance contracts. Each portfolio is further separated by profitability group and issue date into periodic cohorts.

The fulfilment cash flows comprise:

- the best estimates of future cash flows, including amounts expected to be collected from premiums and payouts for claims, benefits and expenses, which are projected using assumptions based on demographic and operating experience;
- an adjustment for the time value of money and financial risks associated with the future cash flows; and
- an adjustment for non-financial risk that reflects the uncertainty about the amount and timing of future cash flows.

In contrast to the Group's IFRS 4 accounting where profits are recognised upfront, the CSM will be systematically recognised in revenue, as services are provided over the expected coverage period of the group of contracts without any change to the overall profit of the contracts. Losses resulting from the recognition of onerous contracts are recognised in the income statement immediately.

The CSM is adjusted depending on the measurement model of the group of insurance contracts. While the general measurement model ('GMM') is the default measurement model under IFRS 17, the Group expects that the majority of its contracts will be accounted for under the variable fee approach ('VFA'), which is mandatory to apply for insurance contracts with direct participation features upon meeting the eligibility criteria.

IFRS 17 requires entities to apply the standard retrospectively as if it had always applied, using the full retrospective approach ('FRA') unless it is impracticable. When the FRA is impracticable such as when there is a lack of sufficient and reliable data, an entity has an accounting policy choice to use either the modified retrospective approach ('MRA') or the fair value approach ('FVA'). HSBC will apply the FRA for new business from 2018 at the earliest, subject to practicability, and the FVA for the majority of contracts for which the FRA is impracticable. Where the FVA is used, the measurement takes into account the cost of capital that a market participant within the jurisdiction would be expected to hold based on the asset and liability positions on the transition date.

The Group will make use of the option to re-designate eligible financial assets held to support insurance liabilities, currently measured at amortised cost, as financial assets measured at fair value through profit or loss. Following re-designation, interest income earned on these financial assets will no longer be shown in 'net interest income', and will instead form part of 'net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss' in accordance with HSBC's income and expense policy set out in Note 1.2(b) on page 339.

The Group will also make use of the risk mitigation option for a number of economic offsets between the VFA contracts and reinsurance contracts held that meet the requirements, and the other comprehensive income ('OCI') option to a limited extent for some contracts.

Impact of IFRS 17

Changes to equity on transition are driven by the elimination of the PVIF asset, the re-designation of certain eligible financial assets in the scope of IFRS 9, the remeasurement of insurance liabilities and assets under IFRS 17, and the recognition of the CSM.

IFRS 17 requires the use of current market values for the measurement of insurance liabilities. The shareholder's share of the investment experience and assumption changes will be absorbed by the CSM and released over time to profit or loss under the VFA. For contracts measured under GMM, the shareholder's share of the investment volatility is recorded in profit or loss as it arises. Under IFRS 17, operating expenses will be lower as directly attributable costs will be incorporated in the CSM and recognised in the insurance service result.

While the profit over the life of an individual contract will be unchanged, its emergence will be later under IFRS 17.

All of these impacts will be subject to deferred tax.

Estimates of the opening balance sheet as at 1 January 2022 have been calculated and are presented below, showing separately the impact on the total assets, liabilities and equity of our insurance manufacturing operations and Group equity. These estimates are based on accounting policies, assumptions, judgements and estimation techniques that remain subject to change.

Impact of transition to IFRS 17, at 1 January 2022	**Insurance manufacturing operations**			**Group**
	Assets	**Liabilities**	**Equity**	**Equity**
	$bn	**$bn**	**$bn**	**$bn**
Balance sheet values at 1 January 2022 under IFRS 4	**144.6**	**127.6**	**17.0**	**206.8**
Removal of PVIF	**(9.5)**	**—**	**(9.5)**	**(9.5)**
Replacement of IFRS 4 liabilities with IFRS 17	**(0.4)**	**7.3**	**(7.7)**	**(8.1)**
Removal of IFRS 4 liabilities and recording of IFRS 17 fulfilment cash	***(0.3)***	***(2.2)***	***1.9***	***1.9***
IFRS 17 contractual service margin	***(0.1)***	***9.5***	***(9.6)***	***(10.0)***
Remeasurement effect of IFRS 9 re-designations	**4.9**	**—**	**4.9**	**4.9**
Tax effect	**0.6**	**(1.6)**	**2.2**	**2.2**
Estimated balance sheet values at 1 January 2022 under IFRS 17	**140.2**	**133.3**	**6.9**	**196.3**

PVIF of $9.5bn less deferred tax of $1.7bn constitute the overall estimated reduction in intangible assets, after tax, of $7.8bn on transition to IFRS 17.

The Group's accounting for insurance contracts considers a broader set of cash flows than those arising within the insurance manufacturing entities. This includes the effect of eliminating intra-Group fees associated with distribution of policies through the Group's banking channels and directly attributable costs incurred by other Group entities. These factors lead to an increase to the Group CSM after inclusion of distribution activities of approximately $0.4bn, with a consequential reduction to Group's equity of approximately $0.4bn after the inclusion of deferred tax.

(d) Foreign currencies

HSBC's consolidated financial statements are presented in US dollars because the US dollar and currencies linked to it form the major currency bloc in which HSBC transacts and funds its business. The US dollar is also HSBC Holdings' functional currency because the US dollar and currencies linked to it are the most significant currencies relevant to the underlying transactions, events and conditions of its subsidiaries, as well as representing a significant proportion of its funds generated from financing activities.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date, except non-monetary assets and liabilities measured at historical cost, which are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income or in the income statement depending on where the gain or loss on the underlying item is recognised. Except for subsidiaries operating in hyperinflationary economies (see Note 1.2(p)), in the consolidated financial statements, the assets and liabilities of branches, subsidiaries, joint ventures and associates whose functional currency is not US dollars are translated into the Group's presentation currency at the rate of exchange at the balance sheet date, while their results are translated into US dollars at the average rates of exchange for the reporting period. Exchange differences arising are recognised in other comprehensive income. On disposal of a foreign operation, exchange differences previously recognised in other comprehensive income are reclassified to the income statement.

(e) Presentation of information

Certain disclosures required by IFRSs have been included in the sections marked as ('Audited') in the *Annual Report and Accounts 2022* as follows:

- Disclosures concerning the nature and extent of risks relating to insurance contracts and financial instruments are included in the 'Risk review' on pages 131 to 238.
- The 'Own funds disclosure' is included in the 'Risk review' on page 206.
- Disclosures relating to HSBC's securitisation activities and structured products are included in the 'Risk review' on pages 131 to238.

HSBC follows the UK Finance Disclosure Code. The UK Finance Disclosure Code aims to increase the quality and comparability of UK banks' disclosures and sets out five disclosure principles together with supporting guidance agreed in 2010. In line with the principles of the UK Finance Disclosure Code, HSBC assesses good practice recommendations issued from time to time by relevant regulators and standard setters, and will assess the applicability and relevance of such guidance, enhancing disclosures where appropriate.

(f) Critical accounting estimates and judgements

The preparation of financial information requires the use of estimates and judgements about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items, highlighted as the 'critical accounting estimates and judgements' in section 1.2 below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based. This could result in materially different estimates and judgements from those reached by management for the purposes of these financial statements. Management's selection of HSBC's accounting policies that contain critical estimates and judgements reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved.

Management has considered the impact of climate-related risks on HSBC's financial position and performance. While the effects of climate change are a source of uncertainty, as at 31 December 2022 management do not consider there to be a material impact on our critical judgements and estimates from the physical, transition and other climate-related risks in the short to medium term. In particular management has considered the known and observable potential impact of climate-related risks of associated judgements and estimates in our value in use calculations.

(g) Segmental analysis

HSBC's Chief Operating Decision Maker is the Group Chief Executive, who is supported by the rest of the Group Executive Committee ('GEC'), which operates as a general management committee under the direct authority of the Board. Operating segments are reported in a manner consistent with the internal reporting provided to the Group Chief Executive and the GEC.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the Group's accounting policies. Segmental income and expenses include transfers between segments, and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made.

(h) Going concern

The financial statements are prepared on a going concern basis, as the Directors are satisfied that the Group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows, capital requirements and capital resources. These considerations include stressed scenarios that reflect the uncertainty in structural changes from the Covid-19 pandemic, the Russia-Ukraine war, disrupted supply chains globally, slower Chinese economic activity, climate change and other top and emerging risks, as well as from the related impacts on profitability, capital and liquidity.

1.2 Summary of significant accounting policies

(a) Consolidation and related policies

Investments in subsidiaries

Where an entity is governed by voting rights, HSBC consolidates when it holds – directly or indirectly – the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power to direct relevant activities, and whether power is held as agent or principal.

Business combinations are accounted for using the acquisition method. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. This election is made for each business combination. HSBC Holdings' investments in subsidiaries are stated at cost less impairment losses.

Impairment testing is performed where there is an indication of impairment, by comparing the recoverable amount of the relevant investment to its carrying amount.

Critical accounting estimates and judgements

Investments in subsidiaries are tested for impairment when there is an indication that the investment may be impaired, which involves estimations of value in use reflecting management's best estimate of the future cash flows of the investment and the rates used to discount these cash flows, both of which are subject to uncertain factors as follows:

Judgements	Estimates
• The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. Where such circumstances are determined to exist, management re-tests for impairment more frequently than once a year when indicators of impairment exist. This ensures that the assumptions on which the cash flow forecasts are based continue to reflect current market conditions and management's best estimate of future business prospects.	• The future cash flows of each investment are sensitive to the cash flows projected for the periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of sustainable cash flows thereafter. Forecasts are compared with actual performance and verifiable economic data, but they reflect management's view of future business prospects at the time of the assessment. • The rates used to discount future expected cash flows can have a significant effect on their valuation, and are based on the costs of equity assigned to the investment. The cost of equity percentage is generally derived from a capital asset pricing model and the market implied cost of equity, which incorporates inputs reflecting a number of financial and economic variables, including the risk-free interest rate in the country concerned and a premium for the risk of the business being evaluated. These variables are subject to fluctuations in external market rates and economic conditions beyond management's control. • Key assumptions used in estimating impairment in subsidiaries are described in Note 19.

Goodwill

Goodwill is allocated to cash-generating units ('CGUs') for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. HSBC's CGUs are based on geographical regions subdivided by global business, except for Global Banking and Markets, for which goodwill is monitored on a global basis.

Impairment testing is performed at least once a year, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount.

Goodwill is included in a disposal group if the disposal group is a CGU to which goodwill has been allocated or it is an operation within such a CGU. The amount of goodwill included in a disposal group is measured on the basis of the relative values of the operation disposed of and the portion of the CGU retained.

Critical accounting estimates and judgements

The review of goodwill and non-financial assets (see Note 1.2(n)) for impairment reflects management's best estimate of the future cash flows of the CGUs and the rates used to discount these cash flows, both of which are subject to uncertain factors as follows:

Judgements	Estimates
• The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. Where such circumstances are determined to exist, management re-tests goodwill for impairment more frequently than once a year when indicators of impairment exist. This ensures that the assumptions on which the cash flow forecasts are based continue to reflect current market conditions and management's best estimate of future business prospects.	• The future cash flows of the CGUs are sensitive to the cash flows projected for the periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of sustainable cash flows thereafter. Forecasts are compared with actual performance and verifiable economic data, but they reflect management's view of future business prospects at the time of the assessment. • The rates used to discount future expected cash flows can have a significant effect on their valuation, and are based on the costs of equity assigned to individual CGUs. The cost of equity percentage is generally derived from a capital asset pricing model and market implied cost of equity, which incorporates inputs reflecting a number of financial and economic variables, including the risk-free interest rate in the country concerned and a premium for the risk of the business being evaluated. These variables are subject to fluctuations in external market rates and economic conditions beyond management's control. • Key assumptions used in estimating goodwill and non-financial asset impairment are described in Note 21.

HSBC sponsored structured entities

HSBC is considered to sponsor another entity if, in addition to ongoing involvement with the entity, it had a key role in establishing that entity or in bringing together relevant counterparties so the transaction that is the purpose of the entity could occur. HSBC is generally not considered a sponsor if the only involvement with the entity is merely administrative.

Interests in associates and joint arrangements

Joint arrangements are investments in which HSBC, together with one or more parties, has joint control. Depending on HSBC's rights and obligations, the joint arrangement is classified as either a joint operation or a joint venture.

HSBC classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint arrangements, as associates.

HSBC recognises its share of the assets, liabilities and results in a joint operation. Investments in associates and interests in joint ventures are recognised using the equity method. The attributable share of the results and reserves of joint ventures and associates is included in the consolidated financial statements of HSBC based on either financial statements made up to 31 December or pro-rated amounts adjusted for any material transactions or events occurring between the date the financial statements are available and 31 December.

Investments in associates and joint ventures are assessed at each reporting date and tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in joint ventures and associates is not tested separately for impairment, but is assessed as part of the carrying amount of the investment.

Critical accounting estimates and judgements

The most significant critical accounting estimates relate to the assessment of impairment of our investment in Bank of Communications Co. Limited ('BoCom'), which involves estimations of value in use:	
Judgements	**Estimates**
	• Management's best estimate of BoCom's earnings is based on management's explicit forecasts over the short to medium term and the capital maintenance charge, which is management's forecast of the earnings that need to be withheld in order for BoCom to meet capital requirements over the forecast period, both of which are subject to uncertain factors. • Key assumptions used in estimating BoCom's value in use, the sensitivity of the value in use calculations to different assumptions and a sensitivity analysis that shows the changes in key assumptions that would reduce the excess of value in use over the carrying amount (the 'headroom') to nil are described in Note 18.

(b) Income and expense

Operating income

Interest income and expense

Interest income and expense for all financial instruments, excluding those classified as held for trading or designated at fair value, are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. However, as an exception to this, interest on debt instruments issued by HSBC for funding purposes that are designated under the fair value option to reduce an accounting mismatch and on derivatives managed in conjunction with those debt instruments is included in interest expense.

Interest on credit-impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Non-interest income and expense

HSBC generates fee income from services provided at a fixed price over time, such as account service and card fees, or when HSBC delivers a specific transaction at a point in time, such as broking services and import/export services. With the exception of certain fund management and performance fees, all other fees are generated at a fixed price. Fund management and performance fees can be variable depending on the size of the customer portfolio and HSBC's performance as fund manager. Variable fees are recognised when all uncertainties are resolved. Fee income is generally earned from short-term contracts with payment terms that do not include a significant financing component.

HSBC acts as principal in the majority of contracts with customers, with the exception of broking services. For most brokerage trades, HSBC acts as agent in the transaction and recognises broking income net of fees payable to other parties in the arrangement.

HSBC recognises fees earned on transaction-based arrangements at a point in time when it has fully provided the service to the customer. Where the contract requires services to be provided over time, income is recognised on a systematic basis over the life of the agreement.

Where HSBC offers a package of services that contains multiple non-distinct performance obligations, such as those included in account service packages, the promised services are treated as a single performance obligation. If a package of services contains distinct performance obligations, such as those including both account and insurance services, the corresponding transaction price is allocated to each performance obligation based on the estimated stand-alone selling prices.

Dividend income is recognised when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

Net income/(expense) from financial instruments measured at fair value through profit or loss includes the following:

- 'Net income from financial instruments held for trading or managed on a fair value basis': This comprises net trading income, which includes all gains and losses from changes in the fair value of financial assets and financial liabilities held for trading and other financial instruments managed on a fair value basis, together with the related interest income, expense and dividends, excluding the effect of changes in the credit risk of liabilities managed on a fair value basis. It also includes all gains and losses from changes in the fair value of derivatives that are managed in conjunction with financial assets and liabilities measured at fair value through profit or loss.
- 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss': This includes interest income, interest expense and dividend income in respect of financial assets and liabilities measured at fair value through profit or loss; and those derivatives managed in conjunction with the above that can be separately identifiable from other trading derivatives.
- 'Changes in fair value of designated debt instruments and related derivatives': Interest paid on debt instruments and interest cash flows on related derivatives is presented in interest expense where doing so reduces an accounting mismatch.
- 'Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss': This includes interest on instruments that fail the solely payments of principal and interest test, see (d) below.

The accounting policies for insurance premium income are disclosed in Note 1.2(j).

(c) Valuation of financial instruments

All financial instruments are initially recognised at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, HSBC recognises the difference as a trading gain or loss at inception (a 'day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and recognised in the income statement over the life of the transaction until the transaction matures, is closed out, the valuation inputs become observable or HSBC enters into an offsetting transaction. The fair value of financial instruments is generally measured on an individual basis. However, in cases where HSBC manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the financial statements, unless they satisfy the IFRS offsetting criteria.

Critical accounting estimates and judgements

The majority of valuation techniques employ only observable market data. However, certain financial instruments are classified on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, and for them, the measurement of fair value is more judgemental:

Judgements	Estimates
• An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, greater than 5% of the instrument's valuation is driven by unobservable inputs. • 'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).	• Details on the Group's level 3 financial instruments and the sensitivity of their valuation to the effect of applying reasonably possible alternative assumptions in determining their fair value are set out in Note 12.

(d) Financial instruments measured at amortised cost

Financial assets that are held to collect the contractual cash flows and which contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at amortised cost. Such financial assets include most loans and advances to banks and customers and some debt securities. In addition, most financial liabilities are measured at amortised cost. HSBC accounts for regular way amortised cost financial instruments using trade date accounting. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs.

HSBC may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be sold shortly after origination, the commitment to lend is recorded as a derivative. When HSBC intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

Contracts that are economically equivalent to reverse repo or repo agreements (such as sales or purchases of debt securities entered into together with total return swaps with the same counterparty) are accounted for similarly to, and presented together with, reverse repo or repo agreements.

(e) Financial assets measured at fair value through other comprehensive income

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and which contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at fair value through other comprehensive income ('FVOCI'). These comprise primarily debt securities. They are recognised on the trade date when HSBC enters into contractual arrangements to purchase and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses) are recognised in other comprehensive income until the assets are sold. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial instruments'. Financial assets measured at FVOCI are included in the impairment calculations set out below and impairment is recognised in profit or loss.

(f) Equity securities measured at fair value with fair value movements presented in other comprehensive income

The equity securities for which fair value movements are shown in other comprehensive income are business facilitation and other similar investments where HSBC holds the investments other than to generate a capital return. Dividends from such investments are recognised in profit or loss. Gains or losses on the derecognition of these equity securities are not transferred to profit or loss. Otherwise, equity securities are measured at fair value through profit or loss.

(g) Financial instruments designated at fair value through profit or loss

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated irrevocably at inception:

- The use of the designation removes or significantly reduces an accounting mismatch.
- A group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy.
- The financial liability contains one or more non-closely related embedded derivatives.

Designated financial assets are recognised when HSBC enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognised when HSBC enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income from financial instruments held for trading or managed on a fair value basis' or 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss' or 'Changes in fair value of designated debt and related derivatives' except for the effect of changes in the liabilities' credit risk, which is presented in 'Other comprehensive income', unless that treatment would create or enlarge an accounting mismatch in profit or loss.

Under the above criteria, the main classes of financial instruments designated by HSBC are:

- Debt instruments for funding purposes that are designated to reduce an accounting mismatch: The interest and/or foreign exchange exposure on certain fixed-rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.

- Financial assets and financial liabilities under unit-linked and non-linked investment contracts: A contract under which HSBC does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries are determined based on the fair value of the assets held in the linked funds. If no fair value designation was made for the related assets, at least some of the assets would otherwise be measured at either fair value through other comprehensive income or amortised cost. The related financial assets and liabilities are managed and reported to management on a fair value basis. Designation at fair value of the financial assets and related liabilities allows changes in fair values to be recorded in the income statement and presented in the same line.
- Financial liabilities that contain both deposit and derivative components: These financial liabilities are managed and their performance evaluated on a fair value basis.

(h) Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value through profit or loss. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative. This includes embedded derivatives in financial liabilities, which are bifurcated from the host contract when they meet the definition of a derivative on a stand-alone basis.

Where the derivatives are managed with debt securities issued by HSBC that are designated at fair value where doing so reduces an accounting mismatch, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

Hedge accounting

When derivatives are not part of fair value designated relationships, if held for risk management purposes they are designated in hedge accounting relationships where the required criteria for documentation and hedge effectiveness are met. HSBC uses these derivatives or, where allowed, other non-derivative hedging instruments in fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

Fair value hedge

Fair value hedge accounting does not change the recording of gains and losses on derivatives and other hedging instruments, but results in recognising changes in the fair value of the hedged assets or liabilities attributable to the hedged risk that would not otherwise be recognised in the income statement. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued and the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

Cash flow hedge

The effective portion of gains and losses on hedging instruments is recognised in other comprehensive income and the ineffective portion of the change in fair value of derivative hedging instruments that are part of a cash flow hedge relationship is recognised immediately in the income statement within 'Net income from financial instruments held for trading or managed on a fair value basis'. The accumulated gains and losses recognised in other comprehensive income are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. When a hedge relationship is discontinued, or partially discontinued, any cumulative gain or loss recognised in other comprehensive income remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in other comprehensive income is immediately reclassified to the income statement.

Net investment hedge

Hedges of net investments in foreign operations are accounted for in a similar way to cash flow hedges. The effective portion of gains and losses on the hedging instrument is recognised in other comprehensive income and other gains and losses are recognised immediately in the income statement. Gains and losses previously recognised in other comprehensive income are reclassified to the income statement on the disposal, or part-disposal, of the foreign operation.

Derivatives that do not qualify for hedge accounting

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

(i) Impairment of amortised cost and FVOCI financial assets

Expected credit losses ('ECL') are recognised for loans and advances to banks and customers, non-trading reverse repurchase agreements, other financial assets held at amortised cost, debt instruments measured at fair value through other comprehensive income ('FVOCI'), and certain loan commitments and financial guarantee contracts. At initial recognition, an allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months, or less, where the remaining life is less than 12 months ('12-month ECL'). In the event of a significant increase in credit risk, an allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit impaired are in 'stage 3'. Purchased or originated credit-impaired financial assets ('POCI') are treated differently as set out below.

Credit impaired (stage 3)

HSBC determines that a financial instrument is credit impaired and in stage 3 by considering relevant objective evidence, primarily whether contractual payments of either principal or interest are past due for more than 90 days, there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition, or the loan is otherwise considered to be in default.

If such unlikeliness to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore, the definitions of credit impaired and default are aligned as far as possible so that stage 3 represents all loans that are considered defaulted or otherwise credit impaired.

Interest income is recognised by applying the effective interest rate to the amortised cost amount, i.e. gross carrying amount less ECL allowance.

Write-off

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Forbearance

Loans are identified as forborne and classified as either performing or non-performing when HSBC modifies the contractual terms due to financial difficulty of the borrower. Non-performing forborne loans are stage 3 and classified as non-performing until they meet the cure criteria, as specified by applicable credit risk policy (for example, when the loan is no longer in default and no other indicators of default have been present for at least 12 months). Any amount written off as a result of any modification of contractual terms upon entering forbearance would not be reversed.

In 2022, the Group adopted the EBA Guidelines on the application of definition of default for our retail portfolios, which affect credit risk policies and our reporting in respect of the status of loans as credit impaired principally due to forbearance (or curing thereof). Further details are provided under 'Forborne loans and advances' on page 146.

Performing forborne loans are initially stage 2 and remain classified as forborne until they meet applicable cure criteria (for example, they continue to not be in default and no other indicators of default are present for a period of at least 24 months). At this point, the loan is either stage 1 or stage 2 as determined by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms).

A forborne loan is derecognised if the existing agreement is cancelled and a new agreement is made on substantially different terms, or if the terms of an existing agreement are modified such that the forborne loan is a substantially different financial instrument. Any new loans that arise following derecognition events in these circumstances would generally be classified as POCI and will continue to be disclosed as forborne.

Loan modifications other than forborne loans

Loan modifications that are not identified as forborne are considered to be commercial restructurings. Where a commercial restructuring results in a modification (whether legalised through an amendment to the existing terms or the issuance of a new loan contract) such that HSBC's rights to the cash flows under the original contract have expired, the old loan is derecognised and the new loan is recognised at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided. Modifications of certain higher credit risk wholesale loans are assessed for derecognition, having regard to changes in contractual terms that either individually or in combination are judged to result in a substantially different financial instrument. Mandatory and general offer loan modifications that are not borrower specific, for example market-wide customer relief programmes generally do not result in derecognition, but their stage allocation is determined considering all available and supportable information under our ECL impairment policy. Changes made to these financial instruments that are economically equivalent and required by interest rate benchmark reform do not result in the derecognition or a change in the carrying amount of the financial instrument, but instead require the effective interest rate to be updated to reflect the change of the interest rate benchmark.

Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared with that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multifactor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk, and these criteria will differ for different types of lending, particularly between retail and wholesale. However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when 30 days past due. In addition, wholesale loans that are individually assessed, which are typically corporate and commercial customers, and included on a watch or worry list, are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default ('PD'), which encompasses a wide range of information including the obligor's customer risk rating ('CRR'), macroeconomic condition forecasts and credit transition probabilities. For origination CRRs up to 3.3, significant increase in credit risk is measured by comparing the average PD for the remaining term estimated at origination with the equivalent estimation at the reporting date. The quantitative measure of significance varies depending on the credit quality at origination as follows:

Origination CRR	Significance trigger – PD to increase by
0.1–1.2	15bps
2.1–3.3	30bps

For CRRs greater than 3.3 that are not impaired, a significant increase in credit risk is considered to have occurred when the origination PD has doubled. The significance of changes in PD was informed by expert credit risk judgement, referenced to historical credit migrations and to relative changes in external market rates.

For loans originated prior to the implementation of IFRS 9, the origination PD does not include adjustments to reflect expectations of future macroeconomic conditions since these are not available without the use of hindsight. In the absence of this data, origination PD must be approximated assuming through-the-cycle PDs and through-the-cycle migration probabilities, consistent with the instrument's underlying modelling approach and the CRR at origination. For these loans, the quantitative comparison is supplemented with additional CRR deterioration-based thresholds, as set out in the table below:

Origination CRR	Additional significance criteria – number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1–4.2	4 notches
4.3–5.1	3 notches
5.2–7.1	2 notches
7.2–8.2	1 notch
8.3	0 notch

Further information about the 23-grade scale used for CRR can be found on page 146.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores, which incorporate all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogenous portfolios, generally by country, product and brand. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgement is that no prior increase in credit risk is significant. This portfolio-specific threshold therefore identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than that which would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

As additional data becomes available, the retail transfer criteria approach continues to be refined to utilise a more relative approach for certain portfolios. These enhancements take advantage of the increase in origination-related data in the assessment of significant increases in credit risk by comparing remaining lifetime PD to the comparable remaining term lifetime PD at origination based on portfolio-specific origination segments. These enhancements resulted in significant migrations of loans to customers gross carrying amounts from stage 1 to stage 2, but did not have a significant impact on the overall ECL for these portfolios in 2022 due to low loan-to-value ratios.

Unimpaired and without significant increase in credit risk (stage 1)

ECL resulting from default events that are possible within the next 12 months ('12-month ECL') are recognised for financial instruments that remain in stage 1.

Purchased or originated credit impaired

Financial assets that are purchased or originated at a deep discount that reflects the incurred credit losses are considered to be POCI. This population includes new financial instruments recognised in most cases following the derecognition of forborne loans. The amount of change in lifetime ECL for a POCI loan is recognised in profit or loss until the POCI loan is derecognised, even if the lifetime ECL are less than the amount of ECL included in the estimated cash flows on initial recognition.

Movement between stages

Financial assets can be transferred between the different categories (other than POCI) depending on their relative increase in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. In the case of non-performing forborne loans, such financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment and meet the curing criteria as described above.

Measurement of ECL

The assessment of credit risk and the estimation of ECL are unbiased and probability-weighted, and incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money and considers other factors such as climate-related risks.

In general, HSBC calculates ECL using three main components: a probability of default ('PD'), a loss given default ('LGD') and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

HSBC makes use of the Basel II IRB framework where possible, with recalibration to meet the differing IFRS 9 requirements as set out in the following table:

Model	Regulatory capital	IFRS 9
PD	• Through the cycle (represents long-run average PD throughout a full economic cycle) • The definition of default includes a backstop of 90+ days past due, although this has been modified to 180+ days past due for some portfolios, particularly UK and US mortgages	• Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD) • Default backstop of 90+ days past due for all portfolios
EAD	• Cannot be lower than current balance	• Amortisation captured for term products
LGD	• Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn) • Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data • Discounted using cost of capital • All collection costs included	• Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as changes in value of collateral) • No floors • Discounted using the original effective interest rate of the loan • Only costs associated with obtaining/selling collateral included
Other		• Discounted back from point of default to balance sheet date

While 12-month PDs are recalibrated from Basel II models where possible, the lifetime PDs are determined by projecting the 12-month PD using a term structure. For the wholesale methodology, the lifetime PD also takes into account credit migration, i.e. a customer migrating through the CRR bands over its life.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flow ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as of the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest.

Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realisation of collateral based on its estimated fair value of collateral at the time of expected realisation, less costs for obtaining and selling the collateral.

The cash flows are discounted at a reasonable approximation of the original effective interest rate. For significant cases, cash flows under four different scenarios are probability-weighted by reference to the economic scenarios applied more generally by the Group and the judgement of the credit risk officer in relation to the likelihood of the work-out strategy succeeding or receivership being required. For less significant cases, the effect of different economic scenarios and work-out strategies is approximated and applied as an adjustment to the most likely outcome.

Period over which ECL is measured

Expected credit loss is measured from the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which HSBC is exposed to credit risk. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit HSBC's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period HSBC remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between two and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision. For wholesale overdraft facilities, credit risk management actions are taken no less frequently than on an annual basis.

Forward-looking economic inputs

HSBC applies multiple forward-looking global economic scenarios determined with reference to external forecast distributions representative of its view of forecast economic conditions. This approach is considered sufficient to calculate unbiased expected credit losses in most economic environments. In certain economic environments, additional analysis may be necessary and may result in additional scenarios or adjustments, to reflect a range of possible economic outcomes sufficient for an unbiased estimate. The detailed methodology is disclosed in 'Measurement uncertainty and sensitivity analysis of ECL estimates' on page 153.

Critical accounting estimates and judgements

The calculation of the Group's ECL under IFRS 9 requires the Group to make a number of judgements, assumptions and estimates. The most significant are set out below:

Judgements	Estimates
• Defining what is considered to be a significant increase in credit risk • Determining the lifetime and point of initial recognition of overdrafts and credit cards • Selecting and calibrating the PD, LGD and EAD models, which support the calculations, including making reasonable and supportable judgements about how models react to current and future economic conditions • Selecting model inputs and economic forecasts, including determining whether sufficient and appropriately weighted economic forecasts are incorporated to calculate unbiased expected loss • Making management adjustments to account for late-breaking events, model and data limitations and deficiencies, and expert credit judgements • Selecting applicable recovery strategies for certain wholesale credit-impaired loans	• The section 'Measurement uncertainty and sensitivity analysis of ECL estimates', marked as audited from page 153, sets out the assumptions used in determining ECL, and provides an indication of the sensitivity of the result to the application of different weightings being applied to different economic assumptions

(j) Insurance contracts

A contract is classified as an insurance contract where HSBC accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event. An insurance contract may also transfer financial risk, but is accounted for as

an insurance contract if the insurance risk is significant. In addition, HSBC issues investment contracts with discretionary participation features ('DPF'), which are also accounted for as insurance contracts as required by IFRS 4 'Insurance Contracts'.

Net insurance premium income

Premiums for life insurance contracts are accounted for when receivable, except in unit-linked insurance contracts where premiums are accounted for when liabilities are established. Reinsurance premiums are accounted for in the same accounting period as the premiums for the direct insurance contracts to which they relate.

Net insurance claims and benefits paid and movements in liabilities to policyholders

Gross insurance claims for life insurance contracts reflect the total cost of claims arising during the year, including claim handling costs and any policyholder bonuses allocated in anticipation of a bonus declaration.

Maturity claims are recognised when due for payment. Surrenders are recognised when paid or at an earlier date on which, following notification, the policy ceases to be included within the calculation of the related insurance liabilities. Death claims are recognised when notified.

Reinsurance recoveries are accounted for in the same period as the related claim.

Liabilities under insurance contracts

Liabilities under non-linked life insurance contracts are calculated by each life insurance operation based on local actuarial principles. Liabilities under unit-linked life insurance contracts are at least equivalent to the surrender or transfer value, which is calculated by reference to the value of the relevant underlying funds or indices.

Future profit participation on insurance contracts with DPF

Where contracts provide discretionary profit participation benefits to policyholders, liabilities for these contracts include provisions for the future discretionary benefits to policyholders. These provisions reflect the actual performance of the investment portfolio to date and management's expectation of the future performance of the assets backing the contracts, as well as other experience factors such as mortality, lapses and operational efficiency, where appropriate. The benefits to policyholders may be determined by the contractual terms, regulation, or past distribution policy.

Investment contracts with DPF

While investment contracts with DPF are financial instruments, they continue to be treated as insurance contracts as required by IFRS 4. The Group therefore recognises the premiums for these contracts as revenue and recognises as an expense the resulting increase in the carrying amount of the liability.

In the case of net unrealised investment gains on these contracts, whose discretionary benefits principally reflect the actual performance of the investment portfolio, the corresponding increase in the liabilities is recognised in either the income statement or other comprehensive income, following the treatment of the unrealised gains on the relevant assets. In the case of net unrealised losses, a deferred participating asset is recognised only to the extent that its recoverability is highly probable. Movements in the liabilities arising from realised gains and losses on relevant assets are recognised in the income statement.

Present value of in-force long-term insurance business

HSBC recognises the value placed on insurance contracts and investment contracts with DPF, which are classified as long-term and in-force at the balance sheet date, as an asset. The asset represents the present value of the equity holders' interest in the issuing insurance companies' profits expected to emerge from these contracts written at the balance sheet date. The present value of in-force business ('PVIF') is determined by discounting those expected future profits using appropriate assumptions in assessing factors such as future mortality, lapse rates and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees. The PVIF asset is presented gross of attributable tax in the balance sheet and movements in the PVIF asset are included in 'Other operating income' on a gross of tax basis.

(k) Employee compensation and benefits

Share-based payments

HSBC enters into both equity-settled and cash-settled share-based payment arrangements with its employees as compensation for the provision of their services.

The vesting period for these schemes may commence before the legal grant date if the employees have started to render services in respect of the award before the legal grant date, where there is a shared understanding of the terms and conditions of the arrangement. Expenses are recognised when the employee starts to render service to which the award relates.

Cancellations result from the failure to meet a non-vesting condition during the vesting period, and are treated as an acceleration of vesting recognised immediately in the income statement. Failure to meet a vesting condition by the employee is not treated as a cancellation, and the amount of expense recognised for the award is adjusted to reflect the number of awards expected to vest.

Post-employment benefit plans

HSBC operates a number of pension schemes including defined benefit, defined contribution and post-employment benefit schemes.

Payments to defined contribution schemes are charged as an expense as the employees render service.

Defined benefit pension obligations are calculated using the projected unit credit method. The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability, and is presented in operating expenses. Remeasurements of the net defined benefit asset or liability, which comprise actuarial gains and losses, return on plan assets excluding interest and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income. The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets (see Note 1.2 (c)), after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

The costs of obligations arising from other post-employment plans are accounted for on the same basis as defined benefit pension plans.

Critical accounting estimates and judgements

The most significant critical accounting estimates relate to the determination of key assumptions applied in calculating the defined benefit pension obligation for the principal plan.

Judgements	Estimates
	• A range of assumptions could be applied, and different assumptions could significantly alter the defined benefit obligation and the amounts recognised in profit or loss or OCI. • The calculation of the defined benefit pension obligation includes assumptions with regard to the discount rate, inflation rate, pension payments and deferred pensions, pay and mortality. Management determines these assumptions in consultation with the plan's actuaries. • Key assumptions used in calculating the defined benefit pension obligation for the principal plan and the sensitivity of the calculation to different assumptions are described in Note 5.

(l) Tax

Income tax comprises current tax and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case the tax is recognised in the same statement as the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year and on any adjustment to tax payable in respect of previous years. HSBC provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the balance sheet, and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled.

In assessing the probability and sufficiency of future taxable profit, management considers the availability of evidence to support the recognition of deferred tax assets, taking into account the inherent risks in long-term forecasting, including climate change-related, and drivers of recent history of tax losses where applicable. Management also considers the future reversal of existing taxable temporary differences and tax planning strategies, including corporate reorganisations.

Current and deferred tax are calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

Critical accounting estimates and judgements

The recognition of deferred tax assets depends on judgements and estimates.

Judgements	Estimates
• Specific judgements supporting deferred tax assets are described in Note 7.	• The recognition of deferred tax assets is sensitive to estimates of future cash flows projected for periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of cash flows thereafter, on which forecasts of future taxable profit are based, and which affect the expected recovery periods and the pattern of utilisation of tax losses and tax credits. See Note 7 for further detail.

The Group does not consider there to be a significant risk of a material adjustment to the carrying amount of deferred tax assets in the next financial year but does consider this to be an area that is inherently judgemental.

(m) Provisions, contingent liabilities and guarantees

Provisions

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a present legal or constructive obligation that has arisen as a result of past events and for which a reliable estimate can be made.

Critical accounting estimates and judgements

The recognition and measurement of provisions requires the Group to make a number of judgements, assumptions and estimates. The most significant are set out below:

Judgements	Estimates
• Determining whether a present obligation exists. Professional advice is taken on the assessment of litigation and similar obligations. • Provisions for legal proceedings and regulatory matters typically require a higher degree of judgement than other types of provisions. When matters are at an early stage, accounting judgements can be difficult because of the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. As matters progress, management and legal advisers evaluate on an ongoing basis whether provisions should be recognised, revising previous estimates as appropriate. At more advanced stages, it is typically easier to make estimates around a better defined set of possible outcomes.	• Provisions for legal proceedings and regulatory matters remain very sensitive to the assumptions used in the estimate. There could be a wider range of possible outcomes for any pending legal proceedings, investigations or inquiries. As a result it is often not practicable to quantify a range of possible outcomes for individual matters. It is also not practicable to meaningfully quantify ranges of potential outcomes in aggregate for these types of provisions because of the diverse nature and circumstances of such matters and the wide range of uncertainties involved.

Contingent liabilities, contractual commitments and guarantees

Contingent liabilities

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security, and contingent liabilities related to legal proceedings or regulatory matters, are not recognised in the financial statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

Liabilities under financial guarantee contracts that are not classified as insurance contracts are recorded initially at their fair value, which is generally the fee received or present value of the fee receivable.

HSBC Holdings has issued financial guarantees and similar contracts to other Group entities. HSBC elects to account for certain guarantees as insurance contracts in HSBC Holdings' financial statements, in which case they are measured and recognised as insurance liabilities. This election is made on a contract-by-contract basis, and is irrevocable.

(n) Impairment of non-financial assets

Software under development is tested for impairment at least annually. Other non-financial assets are property, plant and equipment, intangible assets (excluding goodwill) and right-of-use assets. They are tested for impairment at the individual asset level when there is indication of impairment at that level, or at the CGU level for assets that do not have a recoverable amount at the individual asset level. In addition, impairment is also tested at the CGU level when there is indication of impairment at that level. For this purpose, CGUs are considered to be the principal operating legal entities divided by global business.

Impairment testing compares the carrying amount of the non-financial asset or CGU with its recoverable amount, which is the higher of the fair value less costs of disposal or the value in use. The carrying amount of a CGU comprises the carrying value of its assets and liabilities, including non-financial assets that are directly attributable to it and non-financial assets that can be allocated to it on a reasonable and consistent basis. Non-financial assets that cannot be allocated to an individual CGU are tested for impairment at an appropriate grouping of CGUs. The recoverable amount of the CGU is the higher of the fair value less costs of disposal of the CGU, which is determined by independent and qualified valuers where relevant, and the value in use, which is calculated based on appropriate inputs (see Note 21).

When the recoverable amount of a CGU is less than its carrying amount, an impairment loss is recognised in the income statement to the extent that the impairment can be allocated on a pro-rata basis to the non-financial assets by reducing their carrying amounts to the higher of their respective individual recoverable amount or nil. Impairment is not allocated to the financial assets in a CGU.

Impairment losses recognised in prior periods for non-financial assets is reversed when there has been a change in the estimate used to determine the recoverable amount. The impairment loss is reversed to the extent that the carrying amount of the non-financial assets would not exceed the amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised in prior periods.

Critical accounting estimates and judgements

The review of goodwill and other non-financial assets for impairment reflects management's best estimate of the future cash flows of the CGUs and the rates used to discount these cash flows, both of which are subject to uncertain factors as described in the Critical accounting estimates and judgements in Note 1.2(a).

(o) Non-current assets and disposal groups held for sale

HSBC classifies non-current assets or disposal groups (including assets and liabilities) as held for sale when their carrying amounts will be recovered principally through sale rather than through continuing use. To be classified as held for sale, the non-current asset or disposal group must be available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets (or disposal groups), and the sale must be highly probable. For a sale to be highly probable, the appropriate level of management must be committed to a plan to sell the asset (or disposal group) and an active programme to locate a buyer and complete the plan must have been initiated. Further, the asset (or disposal group) must be actively marketed for sale at a price that is reasonable in relation to its current fair value. In addition, the sale should be expected to qualify as a completed sale within one year from the date of classification and actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Held for sale assets and disposal groups are measured at the lower of their carrying amount and fair value less costs to sell except for those assets and liabilities that are not within the scope of the measurement requirements of IFRS 5. If the carrying amount of the non-current asset (or disposal group) is greater than the fair value less costs to sell, an impairment loss for any initial or subsequent write down of the asset or disposal group to fair value less costs to sell is recognised. Any such impairment loss is first allocated against the non-current assets that are in scope of IFRS 5 for measurement. This first reduces the carrying amount of any goodwill allocated to the disposal group, and then to the other non-current assets of the disposal group pro rata on the basis of the carrying amount of each asset in the disposal group. Thereafter, any impairment loss in excess of the carrying value of the non-current assets in scope of IFRS 5 for measurement is recognised against the total assets of the disposal group.

Critical accounting judgements

The classification as held for sale depends on certain judgements:

Judgements
Management judgement is required in determining whether the IFRS 5 held for sale criteria are met, including whether a sale is highly probable and expected to complete within one year of classification. The exercise of judgement will normally consider the likelihood of successfully securing any necessary regulatory or political approvals which are almost always required for sales of banking businesses. For large and complex plans judgement will also include an assessment of the enforceability of any binding sale agreement, the nature and magnitude of any disincentives for non-performance, and the ability of the counterparty to undertake necessary pre-completion preparatory work, comply with conditions precedent, and otherwise be able to comply with contractual undertakings to achieve completion within the expected timescale. Once classified as held for sale, judgement is required to be applied on a continuous basis to ensure that classification remains appropriate in future accounting periods.

(p) Hyperinflationary accounting

Hyperinflationary accounting is applied to those subsidiary operations in countries where the three-year cumulative inflation rate is approaching or exceeding 100%. In 2022, this affected the Group's operations in Argentina and Türkiye. The Group applies IAS 29 to the underlying financial information of relevant subsidiaries to restate their local currency results and financial position so as to be stated in terms of the measuring unit current at the end of the reporting period. Those restated results are translated into the Group's presentation currency of US dollars for

consolidation at the closing rate at the balance sheet date. Group comparatives are not restated for inflation and consequential adjustments to the opening balance sheet in relation to hyperinflationary subsidiaries are presented in other comprehensive income. The hyperinflationary gain or loss in respect of the net monetary position of the relevant subsidiary is included in profit or loss.

When applying hyperinflation accounting for the first time, the underlying financial information is restated in terms of the measuring unit current at the end of the reporting period as if the relevant economy had always been hyperinflationary. Group comparatives are not restated for such historic adjustments.

2 Net fee income

Net fee income by global business

	2022				
	Wealth and Personal Banking	**Commercial Banking**	**Global Banking and Markets**	**Corporate Centre**	**Total**
	$m	**$m**	**$m**	**$m**	**$m**
Funds under management	**1,769**	**105**	**503**	**—**	**2,377**
Cards	**2,146**	**313**	**32**	**—**	**2,491**
Credit facilities	**100**	**776**	**598**	**—**	**1,474**
Broking income	**575**	**40**	**634**	**—**	**1,249**
Account services	**337**	**718**	**356**	**1**	**1,412**
Unit trusts	**682**	**14**	**—**	**—**	**696**
Underwriting	**1**	**2**	**443**	**(5)**	**441**
Global custody	**140**	**14**	**767**	**—**	**921**
Remittances	**72**	**378**	**348**	**1**	**799**
Imports/exports	**—**	**475**	**159**	**—**	**634**
Insurance agency commission	**283**	**16**	**1**	**—**	**300**
Other	**1,423**	**1,082**	**2,382**	**(2,468)**	**2,419**
Fee income	**7,528**	**3,933**	**6,223**	**(2,471)**	**15,213**
Less: fee expense	**(2,497)**	**(240)**	**(3,464)**	**2,439**	**(3,762)**
Net fee income	**5,031**	**3,693**	**2,759**	**(32)**	**11,451**

	2021				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Funds under management	1,984	126	546	—	2,656
Cards	1,949	240	23	1	2,213
Credit facilities	103	833	690	1	1,627
Broking income	863	69	669	—	1,601
Account services	429	677	340	6	1,452
Unit trusts	1,065	23	—	—	1,088
Underwriting	4	6	1,009	(2)	1,017
Global custody	167	24	787	—	978
Remittances	75	357	343	—	775
Imports/exports	1	474	145	—	620
Insurance agency commission	324	17	—	—	341
Other	1,305	1,077	2,503	(2,465)	2,420
Fee income	8,269	3,923	7,055	(2,459)	16,788
Less: fee expense	(2,375)	(284)	(3,452)	2,420	(3,691)
Net fee income	5,894	3,639	3,603	(39)	13,097

	2020				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Funds under management	1,686	126	477	—	2,289
Cards	1,564	360	25	—	1,949
Credit facilities	93	740	626	—	1,459
Broking income	862	61	616	—	1,539
Account services	431	598	264	—	1,293
Unit trusts	881	18	—	—	899
Underwriting	5	9	1,002	(1)	1,015
Global custody	189	22	723	—	934
Remittances	77	313	288	(1)	677
Imports/exports	—	417	160	—	577
Insurance agency commission	307	17	1	—	325
Other	1,123	893	2,369	(2,290)	2,095
Fee income	7,218	3,574	6,551	(2,292)	15,051
Less: fee expense	(1,810)	(349)	(3,284)	2,266	(3,177)
Net fee income	5,408	3,225	3,267	(26)	11,874

Net fee income included $6,410m of fees earned on financial assets that were not at fair value through profit or loss, other than amounts included in determining the effective interest rate (2021: $6,742m; 2020: $5,858m), $1,613m of fees payable on financial liabilities that were not at fair value through profit or loss, other than amounts included in determining the effective interest rate (2021: $1,520m; 2020: $1,260m), $3,506m of fees earned on trust and other fiduciary activities (2021: $3,849m; 2020: $3,426m) and $422m of fees payable relating to trust and other fiduciary activities (2021: $305m; 2020: $267m).

3 Net income from financial instruments measured at fair value through profit or loss

	2022	2021	2020
	$m	$m	$m
Net income/(expense) arising on:			
Net trading activities	**2,576**	6,668	11,074
Other instruments managed on a fair value basis	**7,893**	1,076	(1,492)
Net income from financial instruments held for trading or managed on a fair value basis	**10,469**	7,744	9,582
Financial assets held to meet liabilities under insurance and investment contracts	**(3,720)**	4,134	2,481
Liabilities to customers under investment contracts	**326**	(81)	(400)
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	**(3,394)**	4,053	2,081
Derivatives managed in conjunction with HSBC's issued debt securities	**(7,086)**	(2,811)	2,619
Other changes in fair value	**7,009**	2,629	(2,388)
Changes in fair value of designated debt and related derivatives[1]	**(77)**	(182)	231
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**226**	798	455
Year ended 31 Dec	**7,224**	12,413	12,349

1 The debt instruments, issued for funding purposes, are designated under the fair value option to reduce an accounting mismatch.

HSBC Holdings

	2022	2021	2020
	$m	$m	$m
Net income/(expense) arising on:			
– trading activities	**2,094**	87	(336)
– other instruments managed on a fair value basis	**35**	23	1,137
Net income from financial instruments held for trading or managed on a fair value basis	**2,129**	110	801
Derivatives managed in conjunction with HSBC Holdings-issued debt securities	**(1,529)**	(625)	694
Other changes in fair value	**3,673**	974	(1,020)
Changes in fair value of designated debt and related derivatives	**2,144**	349	(326)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**(2,409)**	(420)	1,141
Year ended 31 Dec	**1,864**	39	1,616

4 Insurance business

Net insurance premium income[1]

	Non-linked insurance	**Linked life insurance**	**Investment contracts with DPF[2]**	**Total**
	$m	**$m**	**$m**	**$m**
Gross insurance premium income	**11,685**	**824**	**1,547**	**14,056**
Reinsurers' share of gross insurance premium income	**(1,226)**	**(5)**	**—**	**(1,231)**
Year ended 31 Dec 2022	**10,459**	**819**	**1,547**	**12,825**
Gross insurance premium income	8,529	1,027	1,873	11,429
Reinsurers' share of gross insurance premium income	(555)	(4)	—	(559)
Year ended 31 Dec 2021	7,974	1,023	1,873	10,870
Gross insurance premium income	8,321	579	1,563	10,463
Reinsurers' share of gross insurance premium income	(362)	(8)	—	(370)
Year ended 31 Dec 2020	7,959	571	1,563	10,093

1 This table is presented after elimination of inter-company transactions between our insurance manufacturing operations and other Group entities.
2 Discretionary participation features.

Net insurance claims and benefits paid and movement in liabilities to policyholders[1]

	Non-linked insurance	Linked life insurance	Investment contracts with DPF[2]	Total
	$m	$m	$m	$m
Gross claims and benefits paid and movement in liabilities	**11,008**	**(124)**	**183**	**11,067**
– claims, benefits and surrenders paid	**4,032**	**680**	**1,845**	**6,557**
– movement in liabilities	**6,976**	**(804)**	**(1,662)**	**4,510**
Reinsurers' share of claims and benefits paid and movement in liabilities	**(1,206)**	**8**	**—**	**(1,198)**
– claims, benefits and surrenders paid	**(1,005)**	**(7)**	**—**	**(1,012)**
– movement in liabilities	**(201)**	**15**	**—**	**(186)**
Year ended 31 Dec 2022	**9,802**	**(116)**	**183**	**9,869**
Gross claims and benefits paid and movement in liabilities	10,474	1,134	3,332	14,940
– claims, benefits and surrenders paid	2,929	1,023	2,142	6,094
– movement in liabilities	7,545	111	1,190	8,846
Reinsurers' share of claims and benefits paid and movement in liabilities	(543)	(9)	—	(552)
– claims, benefits and surrenders paid	(343)	(7)	—	(350)
– movement in liabilities	(200)	(2)	—	(202)
Year ended 31 Dec 2021	9,931	1,125	3,332	14,388
Gross claims and benefits paid and movement in liabilities	10,050	1,112	1,853	13,015
– claims, benefits and surrenders paid	3,695	900	2,083	6,678
– movement in liabilities	6,355	212	(230)	6,337
Reinsurers' share of claims and benefits paid and movement in liabilities	(366)	(4)	—	(370)
– claims, benefits and surrenders paid	(430)	(10)	—	(440)
– movement in liabilities	64	6	—	70
Year ended 31 Dec 2020	9,684	1,108	1,853	12,645

1 *This table is presented after elimination of inter-company transactions between our insurance manufacturing operations and other Group entities.*
2 *Discretionary participation features.*

Liabilities under insurance contracts[1]

	Non-linked insurance	Linked life insurance	Investment contracts with DPF[2]	Total
	$m	$m	$m	$m
Gross liabilities under insurance contracts at 1 Jan 2022	**79,475**	**6,513**	**26,757**	**112,745**
Claims and benefits paid	**(4,032)**	**(680)**	**(1,845)**	**(6,557)**
Increase in liabilities to policyholders	**11,008**	**(124)**	**183**	**11,067**
Exchange differences and other movements[2]	**2,004**	**(313)**	**(4,102)**	**(2,411)**
Gross liabilities under insurance contracts at 31 Dec 2022	**88,455**	**5,396**	**20,993**	**114,844**
Reinsurers' share of liabilities under insurance contracts	**(4,247)**	**(10)**	**—**	**(4,257)**
Net liabilities under insurance contracts at 31 Dec 2022	**84,208**	**5,386**	**20,993**	**110,587**
Gross liabilities under insurance contracts at 1 Jan 2021	72,464	6,449	28,278	107,191
Claims and benefits paid	(2,929)	(1,023)	(2,142)	(6,094)
Increase in liabilities to policyholders	10,474	1,134	3,332	14,940
Exchange differences and other movements[3]	(534)	(47)	(2,711)	(3,292)
Gross liabilities under insurance contracts at 31 Dec 2021	79,475	6,513	26,757	112,745
Reinsurers' share of liabilities under insurance contracts	(3,638)	(30)	—	(3,668)
Net liabilities under insurance contracts at 31 Dec 2021	75,837	6,483	26,757	109,077

1 *This table is presented after elimination of inter-company transactions between our insurance manufacturing operations and other Group entities.*
2 *Discretionary participation features.*
3 *'Exchange differences and other movements' includes movements in liabilities arising from net unrealised investment gains recognised in other comprehensive income.*

The key factors contributing to the movement in liabilities to policyholders included movements in the market value of assets supporting policyholder liabilities, death claims, surrenders, lapses, new business, the declaration of bonuses and other amounts attributable to policyholders.

5 Employee compensation and benefits

	2022 $m	2021 $m	2020 $m
Employee compensation and benefits[1]	**18,366**	18,742	18,076
Capitalised wages and salaries	**922**	870	1,320
Gross employee compensation and benefits for the year ended 31 Dec	**19,288**	19,612	19,396
Consists of:			
Wages and salaries	**16,954**	17,072	17,072
Social security costs	**1,413**	1,503	1,378
Post-employment benefits	**921**	1,037	946
Year ended 31 Dec	**19,288**	19,612	19,396

1 *Employee compensation and benefits are presented net of software capitalisation costs in the income statement.*

Average number of persons employed by HSBC during the year by global business[1]

	2022	2021	2020
Wealth and Personal Banking	**135,676**	138,026	144,615
Commercial Banking	**48,004**	44,992	45,631
Global Banking and Markets	**48,597**	48,179	49,055
Corporate Centre	**365**	359	411
Year ended 31 Dec	**232,642**	231,556	239,712

1 *Average number of persons employed represents the number of persons with contracts of service with the Group.*

Average number of persons employed by HSBC during the year by geographical region[1]

	2022	2021	2020
Europe	**58,145**	60,919	64,886
Asia	**132,257**	127,673	129,923
Middle East and North Africa	**9,541**	9,329	9,550
North America	**12,242**	13,845	15,430
Latin America	**20,457**	19,790	19,923
Year ended 31 Dec	**232,642**	231,556	239,712

1 *Average number of persons employed represents the number of persons with contracts of service with the Group.*

Reconciliation of total incentive awards granted to income statement charge

	2022 $m	2021 $m	2020 $m
Total incentive awards approved for the current year	**3,359**	3,495	2,659
Less: deferred bonuses awarded, expected to be recognised in future periods	**(343)**	(379)	(239)
Total incentives awarded and recognised in the current year	**3,016**	3,116	2,420
Add: current year charges for deferred bonuses from previous years	**239**	270	286
Other	**(22)**	4	2
Income statement charge for incentive awards	**3,233**	3,390	2,708

Share-based payments

'Wages and salaries' includes the effect of share-based payments arrangements, of which $400m was equity settled (2021: $467m; 2020: $434m), as follows:

	2022 $m	2021 $m	2020 $m
Conditional share awards	**402**	479	411
Savings-related and other share award option plans	**22**	27	51
Year ended 31 Dec	**424**	506	462

HSBC share awards

Award	Policy
Deferred share awards (including annual incentive awards, long-term incentive ('LTI') awards delivered in shares) and Group Performance Share Plans ('GPSP')	An assessment of performance over the relevant period ending on 31 December is used to determine the amount of the award to be granted. • Deferred awards generally require employees to remain in employment over the vesting period and are generally not subject to performance conditions after the grant date. An exception to these are LTI awards, which are subject to performance conditions. • Deferred share awards generally vest over a period of three, four, five or seven years. • Vested shares may be subject to a retention requirement post-vesting. • Awards are subject to malus and clawback provisions.
International Employee Share Purchase Plan ('ShareMatch')	The plan was first introduced in Hong Kong in 2013 and now includes employees based in 31 jurisdictions. • Shares are purchased in the market each quarter up to a maximum value of £750, or the equivalent in local currency. • Matching awards are added at a ratio of one free share for every three purchased. In mainland China, matching awards are settled in cash. • Matching awards vest subject to continued employment and the retention of the purchased shares for a maximum period of two years and nine months.

Movement on HSBC share awards

	2022 Number (000s)	2021 Number (000s)
Conditional share awards outstanding at 1 Jan	**109,364**	103,473
Additions during the year	**90,190**	75,549
Released in the year	**(67,718)**	(63,635)
Forfeited in the year	**(5,590)**	(6,023)
Conditional share awards outstanding at 31 Dec	**126,246**	109,364
Weighted average fair value of awards granted ($)	**5.60**	6.49

HSBC share option plans

Main plans	Policy
Savings-related share option plans ('Sharesave')	• From 2014, employees eligible for the UK plan could save up to £500 per month with the option to use the savings to acquire shares. • These are generally exercisable within six months following either the third or fifth anniversary of the commencement of a three-year or five-year contract, respectively. • The exercise price is set at a 20% (2021: 20%) discount to the market value immediately preceding the date of invitation.

Calculation of fair values

The fair values of share options are calculated using a Black-Scholes model. The fair value of a share award is based on the share price at the date of the grant.

Movement on HSBC share option plans

	Savings-related share option plans	
	Number (000s)	WAEP[1] £
Outstanding at 1 Jan 2022	**123,197**	**2.85**
Granted during the year[2]	**8,928**	**4.24**
Exercised during the year[3]	**(3,483)**	**3.49**
Expired during the year	**(9,047)**	**3.55**
Forfeited during the year	**(3,944)**	**2.79**
Outstanding at 31 Dec 2022	**115,651**	**2.89**
– of which exercisable	***4,029***	***4.11***
Weighted average remaining contractual life (years)	**2.26**	
Outstanding at 1 Jan 2021	130,953	2.97
Granted during the year[2]	15,410	3.15
Exercised during the year[3]	(3,878)	3.80
Expired during the year	(11,502)	3.53
Forfeited during the year	(7,786)	3.97
Outstanding at 31 Dec 2021	123,197	2.85
– of which exercisable	*4,949*	*4.05*
Weighted average remaining contractual life (years)	3.02	

1 Weighted average exercise price.
2 The weighted average fair value of options granted during the year was $1.45 (2021: $0.85).
3 The weighted average share price at the date the options were exercised was $6.22 (2021: $5.87).

Post-employment benefit plans

The Group operates pension plans throughout the world for its employees. 'Pension risk management processes' on page 205 contains details of the policies and practices associated with these pension plans, some of which are defined benefit plans. The largest defined benefit plan is the HBUK section of the HSBC Bank (UK) Pension Scheme ('the principal plan'), created as a result of the HSBC Bank (UK) Pension Scheme being fully sectionalised in 2018 to meet the requirements of the Banking Reform Act. For further details of how the trustee of the HSBC Bank (UK) Pension Scheme manages climate risk, see 'Managing risk for our stakeholders' on page 64.

HSBC holds on its balance sheet the net surplus or deficit, which is the difference between the fair value of plan assets and the discounted value of scheme liabilities at the balance sheet date for each plan. Surpluses are only recognised to the extent that they are recoverable through reduced contributions in the future or through potential future refunds from the schemes. In assessing whether a surplus is recoverable, HSBC has considered its current right to obtain a future refund or a reduction in future contributions together with the rights of third parties such as trustees.

The principal plan

The principal plan has a defined benefit section and a defined contribution section. The defined benefit section was closed to future benefit accrual in 2015, with defined benefits earned by employees at that date continuing to be linked to their salary while they remain employed by HSBC. The plan is overseen by an independent corporate trustee, who has a fiduciary responsibility for the operation of the plan. Its assets are held separately from the assets of the Group.

The investment strategy of the plan is to hold the majority of assets in bonds, with the remainder in a diverse range of investments. It also includes some interest rate swaps to reduce interest rate risk, inflation swaps to reduce inflation risk and longevity swaps to reduce the impact of longer life expectancy.

The principal plan is subject to the statutory funding objective requirements of the UK Pensions Act 2004, which requires that it be funded to at least the level of technical provisions (an actuarial estimate of the assets needed to provide for the benefits already built up under the plan). Where a funding valuation is carried out and identifies a deficit, the employer and trustee are required to agree to a deficit recovery plan.

The latest funding valuation of the plan at 31 December 2019 was carried out by Colin G Singer of Willis Towers Watson Limited, who is a Fellow of the UK Institute and Faculty of Actuaries, using the projected unit credit method. At that date, the market value of the plan's assets was £31.1bn ($41.1bn) and this exceeded the value placed on its liabilities on an ongoing basis by £2.5bn ($3.3bn), giving a funding level of 109%. These figures include defined contribution assets amounting to £2.4bn ($3.2bn). The main differences between the assumptions used for assessing the defined benefit liabilities for this funding valuation and those used for IAS 19 are that an element of prudence is contained in the funding valuation assumptions for discount rate, inflation rate and life expectancy. The funding valuation is used to judge the amount of cash contributions the Group needs to put into the pension scheme. It will always be different to the IAS 19 accounting surplus, which is an accounting rule concerning employee benefits and shown on the balance sheet of our financial statements. The next funding valuation will be performed in 2023, with an effective date of 31 December 2022. The plan is estimated to remain in a comfortable surplus relative to the funding liabilities as at the end of 2022, based on assumptions consistent with those used to determine the funding liabilities for the 2019 valuation.

The actuary also assessed the value of the liabilities if the plan were to have been stopped and an insurance company asked to secure all future pension payments. This is generally larger than the amount needed on the ongoing basis described above because an insurance company would use more prudent assumption which allow for reserves and include an explicit allowance for the future administrative expenses of the plan. Under this approach, the amount of assets needed was estimated to be £33bn ($44bn) at 31 December 2019.

The trust deed gives the ability for HSBC UK to take a refund of surplus assets after the plan has been run down such that no further beneficiaries remain. In assessing whether a surplus is recoverable, HSBC UK has considered its right to obtain a future refund together with the rights of third parties such as trustees. On this basis, any net surplus in the HBUK section of the plan is recognised in HSBC UK's financial statements and the Group's financial statements,

Guaranteed minimum pension equalisation

Following a judgment issued by the High Court of Justice of England and Wales in 2018, we estimated the financial effect of equalising benefits in respect of guaranteed minimum pension ('GMP') equalisation, and any potential conversion of GMPs into non-GMP benefits, to be an approximate 0.9% increase in the principal plan's liabilities, or £187m ($239m). This was recognised in the income statement in 2018. A further judgment by the High Court on 20 November 2020 ruled that GMPs should also be equalised for those who had previously transferred benefits from the principal plan to another arrangement, with £13m ($17m) consequently being recognised in 2020. We continue to assess the impact of GMP equalisation. In 2022, the trustee and HSBC UK agreed to adopt a simplified approach for all members to implement GMP equalisation. This resulted in an increase to the liabilities of £5m ($6m) and has been recognised as a past service cost through profit and loss.

Income statement charge

	2022	2021	2020
	$m	$m	$m
Defined benefit pension plans	**42**	243	146
Defined contribution pension plans	**852**	767	775
Pension plans	**894**	1,010	921
Defined benefit and contribution healthcare plans	**27**	27	25
Year ended 31 Dec	**921**	1,037	946

Net assets/(liabilities) recognised on the balance sheet in respect of defined benefit plans

	Fair value of plan assets	**Present value of defined benefit obligations**	**Effect of limit on plan surpluses**	**Total**
	$m	**$m**	**$m**	**$m**
Defined benefit pension plans	**32,171**	**(25,693)**	**—**	**6,478**
Defined benefit healthcare plans	**96**	**(388)**	**—**	**(292)**
At 31 Dec 2022	**32,267**	**(26,081)**	**—**	**6,186**
Total employee benefit liabilities (within Note 27 'Accruals, deferred income and other liabilities')				**(1,096)**
Total employee benefit assets (within Note 22 'Prepayments, accrued income and other assets')				**7,282**
Defined benefit pension plans	51,431	(42,277)	(23)	9,131
Defined benefit healthcare plans	103	(572)	—	(469)
At 31 Dec 2021	51,534	(42,849)	(23)	8,662
Total employee benefit liabilities (within Note 27 'Accruals, deferred income and other liabilities')				(1,607)
Total employee benefit assets (within Note 22 'Prepayments, accrued income and other assets')				10,269

HSBC Holdings

Employee compensation and benefit expense in respect of HSBC Holdings' employees in 2022 amounted to $41m (2021: $30m). The average number of persons employed during 2022 was 42 (2021: 54). A small number of employees are members of defined benefit pension plans. These employees are members of the HSBC Bank (UK) Pension Scheme. HSBC Holdings pays contributions to such plan for its own employees in accordance with the schedules of contributions determined by the trustees of the plan and recognises these contributions as an expense as they fall due.

Defined benefit pension plans

Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets		Present value of defined benefit obligations		Effect of the asset ceiling		Net defined benefit asset/(liability)	
	Principal[1] plan	Other plans	Principal[1] plan	Other plans	Principal[1] plan	Other plans	Principal[1] plan	Other plans
	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**41,384**	**10,047**	**(32,255)**	**(10,022)**	**—**	**(23)**	**9,129**	**2**
Service cost	**—**	**—**	**(30)**	**(170)**	**—**	**—**	**(30)**	**(170)**
– current service cost	**—**	**—**	**(12)**	**(161)**	**—**	**—**	**(12)**	**(161)**
– past service cost and gains/(losses) from settlements	**—**	**—**	**(18)**	**(9)**	**—**	**—**	**(18)**	**(9)**
Net interest income/(cost) on the net defined benefit asset/(liability)	**703**	**198**	**(546)**	**(202)**	**—**	**(1)**	**157**	**(5)**
Remeasurement effects recognised in other comprehensive income	**(11,505)**	**(2,181)**	**9,532**	**2,360**	**—**	**(3)**	**(1,973)**	**176**
– return on plan assets (excluding interest income)	**(11,505)**	**(2,181)**	**—**	**—**	**—**	**—**	**(11,505)**	**(2,181)**
– actuarial gains/(losses) financial assumptions	**—**	**—**	**10,543**	**2,383**	**—**	**—**	**10,543**	**2,383**
– actuarial gains/(losses) demographic assumptions	**—**	**—**	**(123)**	**24**	**—**	**—**	**(123)**	**24**
– actuarial gains/(losses) experience adjustments	**—**	**—**	**(888)**	**(47)**	**—**	**—**	**(888)**	**(47)**
– other changes	**—**	**—**	**—**	**—**	**—**	**(3)**	**—**	**(3)**
Exchange differences	**(4,288)**	**(180)**	**3,325**	**35**	**—**	**2**	**(963)**	**(143)**
Benefits paid	**(1,222)**	**(616)**	**1,222**	**686**	**—**	**—**	**—**	**70**
Other movements[2]	**49**	**(218)**	**(35)**	**407**	**—**	**25**	**14**	**214**
At 31 Dec 2022	**25,121**	**7,050**	**(18,787)**	**(6,906)**	**—**	**—**	**6,334**	**144**
At 1 Jan 2021	42,505	10,485	(33,005)	(10,990)	—	(44)	9,500	(549)
Service cost	—	—	(55)	(276)	—	—	(55)	(276)
– current service cost	—	—	(14)	(206)	—	—	(14)	(206)
– past service cost and losses from settlements	—	—	(41)	(70)	—	—	(41)	(70)
Net interest income/(cost) on the net defined benefit asset/(liability)	613	172	(473)	(174)	—	(1)	140	(3)
Remeasurement effects recognised in other comprehensive income	(377)	7	(271)	471	—	22	(648)	500
– return on plan assets (excluding interest income)	(377)	7	—	—	—	—	(377)	7
– actuarial gains/(losses) financial assumptions	—	—	611	315	—	—	611	315
– actuarial gains/(losses) demographic assumptions	—	—	(447)	64	—	—	(447)	64
– actuarial gains/(losses) experience adjustments	—	—	(435)	92	—	—	(435)	92
– other changes	—	—	—	—	—	22	—	22
Exchange differences	(361)	(94)	283	138	—	—	(78)	44
Benefits paid	(1,396)	(645)	1,396	712	—	—	—	67
Other movements[2]	400	122	(130)	97	—	—	270	219
At 31 Dec 2021	41,384	10,047	(32,255)	(10,022)	—	(23)	9,129	2

1 *For further details of the principal plan, see page 352.*
2 *Other movements include contributions by HSBC, contributions by employees, administrative costs and taxes paid by plan.*

HSBC expects to make $129m of contributions to defined benefit pension plans during 2023, consisting of $13m for the principal plan and $116m for other plans. Benefits expected to be paid from the plans to retirees over each of the next five years, and in aggregate for the five years thereafter, are as follows:

Benefits expected to be paid from plans

	2023	2024	2025	2026	2027	2028-2032
	$m	$m	$m	$m	$m	$m
The principal plan[1,2]	1,234	1,275	1,317	1,359	1,403	7,737
Other plans[1]	433	439	445	428	452	2,231

1 *The duration of the defined benefit obligation is 13.2 years for the principal plan under the disclosure assumptions adopted (2021: 17.3 years) and 10.2 years for all other plans combined (2021: 12.7 years).*
2 *For further details of the principal plan, see page 352.*

Fair value of plan assets by asset classes

	31 Dec 2022				31 Dec 2021			
	Value	**Quoted market price in active market**	**No quoted market price in active market**	**Thereof HSBC[1]**	Value	Quoted market price in active market	No quoted market price in active market	Thereof HSBC[1]
	$m	**$m**	**$m**	**$m**	$m	$m	$m	$m
The principal plan[2]								
Fair value of plan assets	**25,121**	**13,915**	**11,206**	**510**	41,384	36,270	5,114	1,037
– equities[3]	**112**	**—**	**112**	**—**	197	5	192	—
– bonds[4]	**14,764**	**14,301**	**463**	**—**	36,295	35,612	683	—
– derivatives	**1,203**	**—**	**1,203**	**510**	1,864	—	1,864	1,037
– property	**842**	**—**	**842**	**—**	1,094	—	1,094	—
– other[5]	**8,200**	**(386)**	**8,586**	**—**	1,934	653	1,281	—
Other plans								
Fair value of plan assets	**7,050**	**5,848**	**1,202**	**37**	10,047	8,248	1,799	52
– equities	**639**	**486**	**153**	**2**	892	668	224	5
– bonds	**4,986**	**4,537**	**449**	**4**	7,080	6,490	590	5
– derivatives	**4**	**(1)**	**5**	**—**	7	(13)	20	—
– property	**109**	**104**	**5**	**—**	123	119	4	—
– other	**1,312**	**722**	**590**	**31**	1,945	984	961	42

1 *The fair value of plan assets includes derivatives entered into with HSBC Bank plc as detailed in Note 36.*
2 *For further details on the principal plan, see page 352.*
3 *Includes $112m (2021: $192m) in relation to private equities.*
4 *Principal plan bonds includes fixed income bonds of $5,285m (2021: $18,315m) and index-linked bonds of $9,479m (2021: $18,160m).*
5 *Other assets within the principal plan includes $8,586m (2021: $1,281m) of unquoted pooled investment vehicles, of which the majority of the underlying assets are invested in bonds.*

Post-employment defined benefit plans' principal actuarial financial assumptions

HSBC determines the discount rates to be applied to its obligations in consultation with the plans' local actuaries, on the basis of current average yields of high-quality (AA-rated or equivalent) debt instruments with maturities consistent with those of the defined benefit obligations.

Key actuarial assumptions for the principal plan[1]

	Discount rate %	**Inflation rate (RPI) %**	**Inflation rate (CPI) %**	**Rate of increase for pensions %**	**Rate of pay increase %**
UK					
At 31 Dec 2022	**4.93**	**3.39**	**2.84**	**3.27**	**3.34**
At 31 Dec 2021	1.90	3.45	3.20	3.30	3.45

1 *For further details on the principal plan, see page 352.*

Mortality tables and average life expectancy at age 60 for the principal plan[1]

	Mortality table	**Life expectancy at age 60 for a male member currently:**		**Life expectancy at age 60 for a female member currently:**	
		Aged 60	**Aged 40**	**Aged 60**	**Aged 40**
UK					
At 31 Dec 2022	**SAPS S3[2]**	**27.1**	**28.6**	**28.4**	**29.9**
At 31 Dec 2021	SAPS S3	27.3	28.8	28.5	30.1

1 *For further details of the principal plan, see page 352.*
2 *Self-administered pension scheme ('SAPS') S3 table, with different tables and multipliers adopted based on gender, pension amount and member status, reflecting the Scheme's actual mortality experience. Improvements are projected in accordance with the Continuous Mortality Investigation's CMI 2021 core projection model with an initial addition to improvement of 0.25% per annum, a long-term rate of improvement of 1.25% per annum, and a 5% weighting to 2020 and 2021 mortality experience reflecting updated long-term view on mortality improvements post-pandemic.*

The effect of changes in key assumptions on the principal plan[1]

	Impact on HBUK section of the HSBC Bank (UK) Pension Scheme obligation[2]			
	Financial impact of increase		Financial impact of decrease	
	2022	2021	**2022**	2021
	$m	$m	**$m**	$m
Discount rate – increase/decrease of 0.25%	**(582)**	(1,337)	**612**	1,425
Inflation rate (RPI and CPI) – increase/decrease of 0.25%	**466**	1,211	**(446)**	(980)
Pension payments and deferred pensions – increase/decrease of 0.25%	**551**	1,267	**(519)**	(1,177)
Pay – increase/decrease of 0.25%	**10**	20	**(10)**	(20)
Change in mortality – increase of 1 year	**470**	1,387	**N/A**	N/A

1 *For further details of the principal plan, see page 352.*
2 *Sensitivities allow for HSBC UK's convention of rounding pension assumptions during 2022 to the nearest 0.01% (2021: 0.05%). The degree of rounding has been increased to align with market practice.*

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit asset recognised in the balance sheet. The methods and types of assumptions used in preparing the sensitivity analysis did not change compared with the prior period.

Directors' emoluments

Details of Directors' emoluments, pensions and their interests are disclosed in the Directors' remuneration report on page 276.

6 Auditor's remuneration

	2022	2021	2020
	$m	$m	$m
Audit fees payable to PwC[1]	**97.6**	88.1	92.9
Other audit fees payable	**1.6**	2.0	1.0
Year ended 31 Dec	**99.2**	90.1	93.9

Fees payable by HSBC to PwC

	2022	2021	2020
	$m	$m	$m
Fees for HSBC Holdings' statutory audit[2]	**21.9**	19.5	21.9
Fees for other services provided to HSBC	**126.2**	109.9	108.3
– audit of HSBC's subsidiaries	**75.7**	68.6	71.0
– audit-related assurance services[3]	**26.4**	18.7	17.2
– other assurance services[4,5]	**24.1**	22.6	20.1
Year ended 31 Dec	**148.1**	129.4	130.2

1 *Audit fees payable to PwC in 2022 included adjustments made to the prior year audit fee after finalisation of the 2021 financial statements.*
2 *Fees payable to PwC for the statutory audit of the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings. They include amounts payable for services relating to the consolidation returns of HSBC Holdings' subsidiaries, which are clearly identifiable as being in support of the Group audit opinion.*
3 *Including services for assurance and other services that relate to statutory and regulatory filings, including interim reviews.*
4 *Including permitted services relating to attestation reports on internal controls of a service organisation primarily prepared for and used by third-party end user, including comfort letters.*
5 *Includes reviews of PRA regulatory reporting returns.*

No fees were payable by HSBC to PwC as principal auditor for the following types of services: internal audit services and services related to litigation, recruitment and remuneration.

Fees payable by HSBC's associated pension schemes to PwC

	2022	2021	2020
	$000	$000	$000
Audit of HSBC's associated pension schemes	**480**	382	316
Year ended 31 Dec	**480**	382	316

No fees were payable by HSBC's associated pension schemes to PwC as principal auditor for the following types of services: internal audit services, other assurance services, services related to corporate finance transactions, valuation and actuarial services, litigation, recruitment and remuneration, and information technology.

In addition to the above, the estimated fees paid to PwC by third parties associated with HSBC amounted to $13.1m (2021: $6.3m; 2020: $12.3m). In these cases, HSBC was connected with the contracting party and may therefore have been involved in appointing PwC. These fees arose from services such as auditing mutual funds managed by HSBC and reviewing the financial position of corporate concerns that borrow from HSBC.

Fees payable for non-audit services for HSBC Holdings are not disclosed separately because such fees are disclosed on a consolidated basis for the Group.

7 Tax

Tax expense

	2022 $m	2021 $m	2020 $m
Current tax[1]	**2,991**	3,250	2,700
– for this year	**3,271**	3,182	2,883
– adjustments in respect of prior years	**(280)**	68	(183)
Deferred tax	**(2,133)**	963	(22)
– origination and reversal of temporary differences	**(2,236)**	874	(341)
– effect of changes in tax rates	**(293)**	132	58
– adjustments in respect of prior years	**396**	(43)	261
Year ended 31 Dec[2]	**858**	4,213	2,678

1 *Current tax included Hong Kong profits tax of $604m (2021: $813m; 2020: $888m). The Hong Kong tax rate applying to the profits of subsidiaries assessable in Hong Kong was 16.5% (2021: 16.5%; 2020: 16.5%).*
2 *In addition to amounts recorded in the income statement, a tax credit of $145m (2021: charge of $7m) was recorded directly to equity.*

Tax reconciliation

The tax charged to the income statement differs from the tax charge that would apply if all profits had been taxed at the UK corporation tax rate as follows:

	2022		2021		2020	
	$m	**%**	$m	%	$m	%
Profit before tax	**17,528**		18,906		8,777	
Tax expense						
Taxation at UK corporation tax rate of 19.00%	**3,329**	**19.0**	3,592	19.0	1,668	19.0
Impact of differently taxed overseas profits in overseas locations	**374**	**2.1**	280	1.5	178	2.0
UK banking surcharge	**283**	**1.6**	332	1.8	(113)	(1.3)
Items increasing tax charge in 2022:						
– local taxes and overseas withholding taxes	**550**	**3.1**	360	1.9	228	2.6
– other permanent disallowables	**202**	**1.2**	236	1.2	333	3.8
– impacts of hyperinflation	**171**	**1.0**	68	0.4	65	0.7
– adjustments in respect of prior period liabilities	**116**	**0.7**	25	0.1	78	0.9
– tax impact of planned sale of French retail banking business	**115**	**0.7**	(434)	(2.3)	—	—
– bank levy	**59**	**0.3**	93	0.5	202	2.3
– movements in provisions for uncertain tax positions	**27**	**0.2**	15	0.1	4	—
– non-deductible goodwill write-down	**3**	**—**	178	0.9	—	—
– impact of differences between French tax basis and IFRSs	**—**	**—**	434	2.3	—	—
Items reducing tax charge in 2022:						
– movements in unrecognised UK deferred tax	**(2,191)**	**(12.5)**	294	1.6	444	5.1
– non-taxable income and gains	**(825)**	**(4.7)**	(641)	(3.4)	(515)	(5.8)
– effect of profits in associates and joint ventures	**(504)**	**(2.9)**	(414)	(2.2)	(250)	(2.8)
– non-UK movements in unrecognised deferred tax	**(312)**	**(1.8)**	(67)	(0.4)	608	6.9
– impact of changes in tax rates	**(293)**	**(1.7)**	132	0.7	58	0.6
– deductions for AT1 coupon payments	**(246)**	**(1.4)**	(270)	(1.4)	(310)	(3.5)
Year ended 31 December 2022	**858**	**4.9**	4,213	22.3	2,678	30.5

The Group's profits are taxed at different rates depending on the country or territory in which the profits arise. The key applicable tax rates for 2022 include Hong Kong (16.5%), the US (21%) and the UK (19%). If the Group's profits were taxed at the statutory rates of the countries in which the profits arose, then the tax rate for the year would have been 22.7% (2021: 22.3%).

The effective tax rate for the year of 4.9% was lower than in the previous year (2021: 22.3%). The effective tax rate for the year reduced by 14.3% as a result of the recognition of previously unrecognised losses in the UK of $2.2bn and France of $0.3bn, in light of improved forecast profitability.

During 2022, legislation was enacted to reduce the rate of the UK banking surcharge from 8% to 3% from 1 April 2023, decreasing the Group's 2022 tax charge by $173m due to the remeasurement of deferred tax balances. The main rate of UK corporation tax will increase from 19% to 25% from 1 April 2023.

Accounting for taxes involves some estimation because tax law is uncertain and its application requires a degree of judgement, which authorities may dispute. Liabilities are recognised based on best estimates of the probable outcome, taking into account external advice where appropriate. Exposures relating to legacy tax cases were reassessed during 2022, resulting in a charge of $27m to the income statement. We do not expect significant liabilities to arise in excess of the amounts provided. HSBC only recognises current and deferred tax assets where recovery is probable.

Movement of deferred tax assets and liabilities

	Loan impairment provisions	Unused tax losses and tax credits	Financial assets at FVOCI	Insurance business	Cash flow hedges	Retirement obligations	Other	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Assets	**1,162**	**2,001**	**84**	**—**	**176**	**109**	**1,690**	**5,222**
Liabilities	**—**	**—**	**(254)**	**(1,640)**	**(22)**	**(2,928)**	**(427)**	**(5,271)**
At 1 Jan 2022	**1,162**	**2,001**	**(170)**	**(1,640)**	**154**	**(2,819)**	**1,263**	**(49)**
Income statement	**6**	**2,425**	**—**	**170**	**—**	**217**	**(685)**	**2,133**
Other comprehensive income	**—**	**—**	**1,679**	**—**	**1,159**	**692**	**(642)**	**2,888**
Foreign exchange and other adjustments	**7**	**(36)**	**(79)**	**35**	**(42)**	**237**	**(18)**	**104**
At 31 Dec 2022	**1,175**	**4,390**	**1,430**	**(1,435)**	**1,271**	**(1,673)**	**(82)**	**5,076**
Assets[1]	**1,175**	**4,390**	**1,430**	**—**	**1,271**	**—**	**1,571**	**9,837**
Liabilities[1]	**—**	**—**	**—**	**(1,435)**	**—**	**(1,673)**	**(1,653)**	**(4,761)**
Assets	1,242	1,821	99	—	25	—	2,850	6,037
Liabilities	—	—	(896)	(1,622)	(70)	(2,306)	(973)	(5,867)
At 1 Jan 2021	1,242	1,821	(797)	(1,622)	(45)	(2,306)	1,877	170
Income statement	(89)	161	—	(43)	—	(336)	(656)	(963)
Other comprehensive income	(5)	33	634	—	212	(205)	115	784
Foreign exchange and other adjustments	14	(14)	(7)	25	(13)	28	(73)	(40)
At 31 Dec 2021	1,162	2,001	(170)	(1,640)	154	(2,819)	1,263	(49)
Assets[1]	1,162	2,001	84	—	176	109	1,690	5,222
Liabilities[1]	—	—	(254)	(1,640)	(22)	(2,928)	(427)	(5,271)

1 *After netting off balances within countries, the balances as disclosed in the accounts are as follows: deferred tax assets of $7,498m (2021: $4,624m) and deferred tax liabilities of $2,422m (2021: $4,673m).*

In applying judgement in recognising deferred tax assets, management has assessed all available information, including future business profit projections and the track record of meeting forecasts. Management's assessment of the likely availability of future taxable profits against which to recover deferred tax assets is based on the most recent financial forecasts approved by management, which cover a five-year period and are extrapolated where necessary, and takes into consideration the reversal of existing taxable temporary differences and past business performance. When forecasts are extrapolated beyond five years, a number of different scenarios are considered, reflecting difference downward risk adjustments, in order to assess the sensitivity of our recognition and measurement conclusions in the context of such longer-term forecasts.

The Group's deferred tax asset of $7.5bn (2021: $4.6bn) included $3.9bn (2021: $0.8bn) of deferred tax assets relating to the UK, $3.3bn (2021: $2.6bn) of deferred tax assets relating to the US and a net deferred asset of $0.7bn (2021: $0.0bn) in France.

The net UK deferred tax asset of $3.9bn excluded a $1.8bn deferred tax liability arising on the UK pension scheme surplus, the reversal of which is not taken into account when estimating future taxable profits. The UK deferred tax assets are supported by forecasts of taxable profit, also taking into consideration the history of profitability in the relevant businesses. The majority of the deferred tax asset relates to tax attributes which do not expire and are forecast to be recovered within five years and as such are less sensitive to changes in long-term profit forecasts. The net UK deferred tax asset includes $2.2bn of previously unrecognised losses that were recognised in the UK in the period in light of improved forecast profitability in the UK group. Sensitivity regarding the recognition and measurement of that deferred tax asset relates to ongoing experience outcome of UK profitability versus forecast, taking into account the non-expiring nature of the underlying attributes.

The net US deferred tax asset of $3.3bn included $1.3bn related to US tax losses, of which $1.1bn expire in 10 to 15 years. Management expects the US deferred tax asset to be substantially recovered within 14 years, with the majority recovered in the first eight years.

The net deferred tax asset in France of $0.7bn included $0.7bn related to tax losses, which are expected to be substantially recovered within nine to 18 years. Following recognition of $0.3bn of previously unrecognised deferred tax asset on losses, deferred tax is now recognised in full in respect of France.

Unrecognised deferred tax

The amount of gross temporary differences, unused tax losses and tax credits for which no deferred tax asset is recognised in the balance sheet was $9.2bn (2021: $16.9bn). This amount included unused UK tax losses of $3.5bn (2021: $10.5bn), which arose prior to 1 April 2017 and can only be recovered against future taxable profits of HSBC Holdings. No deferred tax was recognised on these losses due to the absence of convincing evidence regarding the availability of sufficient future taxable profits against which to recover them. Deferred tax asset recognition is reassessed at each balance sheet date based on the available evidence. Of the total amounts unrecognised, $3.6bn (2021: $10.9bn) had no expiry date, $1.2bn (2021: $0.7bn) was scheduled to expire within 10 years and the remaining balance is expected to expire after ten years.

Deferred tax is not recognised in respect of the Group's investments in subsidiaries and branches where HSBC is able to control the timing of remittance or other realisation and where remittance or realisation is not probable in the foreseeable future. The aggregate temporary differences relating to unrecognised deferred tax liabilities arising on investments in subsidiaries and branches is $11.7bn (2021: $12.7bn) and the corresponding unrecognised deferred tax liability was $0.7bn (2021: $0.8bn).

8 Dividends

Dividends to shareholders of the parent company

	2022		2021		2020	
	Per share	**Total**	Per share	Total	Per share	Total
	$	**$m**	$	$m	$	$m
Dividends paid on ordinary shares						
In respect of previous year:						
– second interim dividend	**0.18**	**3,576**	0.15	3,059	—	—
In respect of current year:						
– first interim dividend	**0.09**	**1,754**	0.07	1,421	—	—
Total	**0.27**	**5,330**	0.22	4,480	—	—
Total dividends on preference shares classified as equity (paid quarterly)[1]	**—**	**—**	4.99	7	62.00	90
Total coupons on capital securities classified as equity		**1,214**		1,303		1,241
Dividends to shareholders		**6,544**		5,790		1,331

1 *HSBC Holdings called $1,450m 6.20% non-cumulative US dollar preference shares on 10 December 2020. The security was redeemed and cancelled on 13 January 2021.*

Total coupons on capital securities classified as equity

		2022		2021	2020
	First call date	**Per security**	**Total $m**	Total $m	Total $m
Perpetual subordinated contingent convertible securities[1]					
$2,000m issued at 6.875%[2]	Jun 2021	**$68.750**	**—**	69	138
$2,250m issued at 6.375%	Sep 2024	**$63.750**	**143**	143	143
$2,450m issued at 6.375%	Mar 2025	**$63.750**	**156**	156	156
$3,000m issued at 6.000%	May 2027	**$60.000**	**180**	180	180
$2,350m issued at 6.250%[3]	Mar 2023	**$62.500**	**147**	147	147
$1,800m issued at 6.500%	Mar 2028	**$65.000**	**117**	117	117
$1,500m issued at 4.600%[4]	Jun 2031	**$46.000**	**69**	69	—
$1,000m issued at 4.000%[5]	Mar 2026	**$40.000**	**40**	20	—
$1,000m issued at 4.700%[6]	Mar 2031	**$47.000**	**47**	24	—
€1,500m issued at 5.250%[7]	Sep 2022	**€52.500**	**76**	93	90
€1,000m issued at 6.000%	Sep 2023	**€60.000**	**63**	70	67
€1,250m issued at 4.750%	Jul 2029	**€47.500**	**65**	72	67
£1,000m issued at 5.875%	Sep 2026	**£58.750**	**70**	80	74
SGD1,000m issued at 4.700%[8]	Jun 2022	**SGD47.000**	**14**	35	35
SGD750m issued at 5.000%	Sep 2023	**SGD50.000**	**27**	28	27
Total			**1,214**	1,303	1,241

1 *Discretionary coupons are paid semi-annually on the perpetual subordinated contingent convertible securities, in denominations of each security's issuance currency 1,000 per security.*
2 *This security was called by HSBC Holdings on 15 April 2021 and was redeemed and cancelled on 1 June 2021.*
3 *This security was called by HSBC Holdings on 30 January 2023 and is expected to be redeemed and cancelled on 23 March 2023.*
4 *This security was issued by HSBC Holdings on 17 December 2020. The first call date commences six calendar months prior to the reset date of 17 June 2031.*
5 *This security was issued by HSBC Holdings on 9 March 2021. The first call date commences six calendar months prior to the reset date of 9 September 2026.*
6 *This security was issued by HSBC Holdings on 9 March 2021. The first call date commences six calendar months prior to the reset date of 9 September 2031.*
7 *This security was called by HSBC Holdings on 9 August 2022 and was redeemed and cancelled on 16 September 2022.*
8 *This security was called by HSBC Holdings on 4 May 2022 and was redeemed and cancelled on 8 June 2022.*

After the end of the year, the Directors approved a second interim dividend in respect of the financial year ended 31 December 2022 of $0.23 per ordinary share, a distribution of approximately $4,593m. The second interim dividend for 2022 will be payable on 27 April 2023 to holders on the Principal Register in the UK, the Hong Kong Overseas Branch Register or the Bermuda Overseas Branch Register on 3 March 2023. No liability was recorded in the financial statements in respect of the second interim dividend for 2022.

On 4 January 2023, HSBC paid a coupon on its €1,250m subordinated capital securities, representing a total distribution of €30m ($31m). No liability was recorded in the balance sheet at 31 December 2022 in respect of this coupon payment.

9 Earnings per share

Basic earnings per ordinary share is calculated by dividing the profit attributable to ordinary shareholders of the parent company by the weighted average number of ordinary shares outstanding, excluding own shares held. Diluted earnings per ordinary share is calculated by dividing the basic earnings, which require no adjustment for the effects of dilutive potential ordinary shares, by the weighted average number of ordinary shares outstanding, excluding own shares held, plus the weighted average number of ordinary shares that would be issued on conversion of dilutive potential ordinary shares.

Profit attributable to the ordinary shareholders of the parent company

	2022	2021	2020
	$m	$m	$m
Profit attributable to shareholders of the parent company	**16,035**	13,917	5,229
Dividend payable on preference shares classified as equity	**—**	(7)	(90)
Coupon payable on capital securities classified as equity	**(1,213)**	(1,303)	(1,241)
Year ended 31 Dec	**14,822**	12,607	3,898

Basic and diluted earnings per share

	2022			2021			2020		
	Profit	**Number of shares**	**Per share**	Profit	Number of shares	Per share	Profit	Number of shares	Per share
	$m	**(millions)**	**$**	$m	(millions)	$	$m	(millions)	$
Basic[1]	**14,822**	**19,849**	**0.75**	12,607	20,197	0.62	3,898	20,169	0.19
Effect of dilutive potential ordinary shares		**137**			105			73	
Diluted[1]	**14,822**	**19,986**	**0.74**	12,607	20,302	0.62	3,898	20,242	0.19

1 *Weighted average number of ordinary shares outstanding (basic) or assuming dilution (diluted).*

The number of anti-dilutive employee share options excluded from the weighted average number of dilutive potential ordinary shares is 9.4 million (2021: 8.6 million; 2020: 14.6 million).

10 Segmental analysis

The Group Chief Executive, supported by the rest of the Group Executive Committee ('GEC'), is considered the Chief Operating Decision Maker ('CODM') for the purposes of identifying the Group's reportable segments. Global business results are assessed by the CODM on the basis of adjusted performance that removes the effects of significant items and currency translation from reported results. Therefore, we present these results on an adjusted basis as required by IFRSs. The 2021 and 2020 adjusted performance information is presented on a constant currency basis. The 2021 and 2020 income statements are converted at the average rates of exchange for 2022, and the balance sheets at 31 December 2021 and 31 December 2020 at the prevailing rates of exchange on 31 December 2022.

Our operations are closely integrated and, accordingly, the presentation of data includes internal allocations of certain items of income and expense. These allocations include the costs of certain support services and global functions to the extent that they can be meaningfully attributed to global businesses. While such allocations have been made on a systematic and consistent basis, they necessarily involve a degree of subjectivity. Costs that are not allocated to global businesses are included in Corporate Centre.

Where relevant, income and expense amounts presented include the results of inter-segment funding along with inter-company and inter-business line transactions. All such transactions are undertaken on arm's length terms. The intra-Group elimination items for the global businesses are presented in Corporate Centre.

Our global businesses

We provide a comprehensive range of banking and related financial services to our customers in our three global businesses. The products and services offered to customers are organised by these global businesses.

- Wealth and Personal Banking ('WPB') provides a full range of retail banking and wealth products to our customers from personal banking to ultra high net worth individuals. Typically, customer offerings include retail banking products, such as current and savings accounts, mortgages and personal loans, credit cards, debit cards and local and international payment services. We also provide wealth management services, including insurance and investment products, global asset management services, investment management and private wealth solutions for customers with more sophisticated and international requirements.
- Commercial Banking ('CMB') offers a broad range of products and services to serve the needs of our commercial customers, including small and medium-sized enterprises, mid-market enterprises and corporates. These include credit and lending, international trade and receivables finance, treasury management and liquidity solutions (payments and cash management and commercial cards), commercial insurance and investments. CMB also offers customers access to products and services offered by other global businesses, such as Global Banking and Markets, which include foreign exchange products, raising capital on debt and equity markets and advisory services.
- Global Banking and Markets ('GBM') provides tailored financial solutions to major government, corporate and institutional clients and private investors worldwide. The client-focused business lines deliver a full range of banking capabilities including financing, advisory and transaction services, a markets business that provides services in credit, rates, foreign exchange, equities, money markets and securities services, and principal investment activities.

HSBC adjusted profit before tax and balance sheet data

	2022				
	Wealth and Personal Banking	Commercial Banking	Global Banking and Markets	Corporate Centre	Total
	$m	$m	$m	$m	$m
Net operating income/(expense) before change in expected credit losses and other credit impairment charges[1]	**24,367**	**16,215**	**15,359**	**(596)**	**55,345**
– external	**21,753**	**16,715**	**19,598**	**(2,721)**	**55,345**
– inter-segment	**2,614**	**(500)**	**(4,239)**	**2,125**	**—**
– of which: net interest income/(expense)	***18,137***	***11,867***	***5,303***	***(2,706)***	***32,601***
Change in expected credit losses and other credit impairment recoveries	**(1,137)**	**(1,858)**	**(587)**	**(10)**	**(3,592)**
Net operating income/(expense)	**23,230**	**14,357**	**14,772**	**(606)**	**51,753**
Total operating expenses	**(14,726)**	**(6,642)**	**(9,325)**	**227**	**(30,466)**
Operating profit/(loss)	**8,504**	**7,715**	**5,447**	**(379)**	**21,287**
Share of profit in associates and joint ventures	**29**	**1**	**(2)**	**2,695**	**2,723**
Adjusted profit before tax	**8,533**	**7,716**	**5,445**	**2,316**	**24,010**
	%	**%**	**%**	**%**	**%**
Share of HSBC's adjusted profit before tax	**35.5**	**32.1**	**22.7**	**9.7**	**100.0**
Adjusted cost efficiency ratio	**60.4**	**41.0**	**60.7**	**38.1**	**55.0**
Adjusted balance sheet data	**$m**	**$m**	**$m**	**$m**	**$m**
Loans and advances to customers (net)	**423,553**	**308,094**	**192,852**	**355**	**924,854**
Interests in associates and joint ventures	**508**	**15**	**108**	**28,623**	**29,254**
Total external assets	**889,450**	**606,698**	**1,321,076**	**149,306**	**2,966,530**
Customer accounts	**779,310**	**458,714**	**331,844**	**435**	**1,570,303**

	2021				
Net operating income/(expense) before change in expected credit losses and other credit impairment charges[1]	20,963	12,538	13,982	(463)	47,020
– external	20,725	12,423	15,590	(1,718)	47,020
– inter-segment	238	115	(1,608)	1,255	—
– of which: net interest income/(expense)	*13,458*	*8,308*	*3,844*	*(716)*	*24,894*
Change in expected credit losses and other credit impairment (charges)/recoveries	213	225	313	3	754
Net operating income/(expense)	21,176	12,763	14,295	(460)	47,774
Total operating expenses	(14,489)	(6,554)	(9,250)	189	(30,104)
Operating profit/(loss)	6,687	6,209	5,045	(271)	17,670
Share of profit in associates and joint ventures	34	1	—	2,898	2,933
Adjusted profit before tax	6,721	6,210	5,045	2,627	20,603
	%	%	%	%	%
Share of HSBC's adjusted profit before tax	32.6	30.1	24.5	12.8	100.0
Adjusted cost efficiency ratio	69.1	52.3	66.2	40.8	64.0
Adjusted balance sheet data	$m	$m	$m	$m	$m
Loans and advances to customers (net)	461,047	330,683	198,779	688	991,197
Interests in associates and joint ventures	489	12	116	27,469	28,086
Total external assets	888,028	586,392	1,157,327	174,073	2,805,820
Customer accounts	819,319	480,201	322,435	592	1,622,547

	2020				
Net operating income/(expense) before change in expected credit losses and other credit impairment charges[1]	21,481	12,889	14,696	(218)	48,848
– external	19,521	13,278	17,635	(1,586)	48,848
– inter-segment	1,960	(389)	(2,939)	1,368	—
– of which: net interest income/(expense)	*14,752*	*8,997*	*4,314*	*(1,324)*	*26,739*
Change in expected credit losses and other credit impairment (charges)/recoveries	(2,878)	(4,710)	(1,227)	—	(8,815)
Net operating income/(expense)	18,603	8,179	13,469	(218)	40,033
Total operating expenses	(14,536)	(6,475)	(8,895)	(539)	(30,445)
Operating profit/(loss)	4,067	1,704	4,574	(757)	9,588
Share of profit in associates and joint ventures	6	(1)	—	2,102	2,107
Adjusted profit before tax	4,073	1,703	4,574	1,345	11,695
	%	%	%	%	%
Share of HSBC's adjusted profit before tax	34.8	14.6	39.1	11.5	100.0
Adjusted cost efficiency ratio	67.7	50.2	60.5	(247.2)	62.3
Adjusted balance sheet data	$m	$m	$m	$m	$m
Loans and advances to customers (net)	436,105	320,084	211,510	1,151	968,850
Interests in associates and joint ventures	437	15	128	25,142	25,722
Total external assets	828,309	530,203	1,238,781	184,030	2,781,323
Customer accounts	788,043	439,889	310,757	540	1,539,229

1 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*

Reported external net operating income is attributed to countries and territories on the basis of the location of the branch responsible for reporting the results or advancing the funds:

	2022	2021	2020
	$m	$m	$m
Reported external net operating income by country/territory[1]	**51,727**	49,552	50,429
– UK	**11,767**	10,909	9,163
– Hong Kong	**15,894**	14,245	15,783
– US	**3,893**	3,795	4,474
– France	**136**	2,179	1,753
– other countries	**20,037**	18,424	19,256

1 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*

Adjusted results reconciliation

	2022			2021				2020			
	Adjusted	**Significant items**	**Reported**	Adjusted	Currency translation	Significant items	Reported	Adjusted	Currency translation	Significant items	Reported
	$m	**$m**	**$m**	$m	$m	$m	$m	$m	$m	$m	$m
Revenue[1]	**55,345**	**(3,618)**	**51,727**	47,020	3,074	(542)	49,552	48,848	1,523	58	50,429
ECL	**(3,592)**	**—**	**(3,592)**	754	174	—	928	(8,815)	(2)	—	(8,817)
Operating expenses	**(30,466)**	**(2,864)**	**(33,330)**	(30,104)	(2,181)	(2,335)	(34,620)	(30,445)	(1,170)	(2,817)	(34,432)
Share of profit in associates and joint ventures	**2,723**	**—**	**2,723**	2,933	113	—	3,046	2,107	(48)	(462)	1,597
Profit/(loss) before tax	**24,010**	**(6,482)**	**17,528**	20,603	1,180	(2,877)	18,906	11,695	303	(3,221)	8,777

1 *Net operating income before change in expected credit losses and other credit impairment charges, also referred to as revenue.*

Adjusted balance sheet reconciliation

	2022	2021			2020		
	Reported and adjusted	Adjusted	Currency translation	Reported	Adjusted	Currency translation	Reported
	$m	$m	$m	$m	$m	$m	$m
Loans and advances to customers (net)	**924,854**	991,197	54,617	1,045,814	968,850	69,137	1,037,987
Interests in associates and joint ventures	**29,254**	28,086	1,523	29,609	25,722	962	26,684
Total external assets	**2,966,530**	2,805,820	152,119	2,957,939	2,781,323	202,841	2,984,164
Customer accounts	**1,570,303**	1,622,547	88,027	1,710,574	1,539,229	103,551	1,642,780

Adjusted profit reconciliation

	2022	2021	2020
	$m	$m	$m
Year ended 31 Dec			
Adjusted profit before tax	**24,010**	20,603	11,695
Significant items	**(6,482)**	(2,877)	(3,221)
– customer redress programmes (revenue)	**8**	11	(21)
– disposals, acquisitions and investment in new businesses (revenue)[1]	**(2,799)**	—	(10)
– fair value movements on financial instruments[2]	**(579)**	(242)	264
– restructuring and other related costs (revenue)[3]	**(248)**	(307)	(170)
– customer redress programmes (operating expenses)	**31**	(49)	54
– disposals, acquisitions and investment in new businesses (operating expenses)	**(18)**	—	—
– impairment of goodwill and other intangible assets	**4**	(587)	(1,090)
– past service costs of guaranteed minimum pension benefits equalisation	**—**	—	(17)
– restructuring and other related costs (operating expenses)[4]	**(2,881)**	(1,836)	(1,908)
– settlements and provisions in connection with legal and other regulatory matters	**—**	—	(12)
– impairment of goodwill (share of profit in associates and joint ventures)[5]	**—**	—	(462)
– currency translation on significant items		133	151
Currency translation		1,180	303
Reported profit before tax	**17,528**	18,906	8,777

1 *Includes losses from classifying businesses as held for sale as part of the broader restructuring of our European business, of which $2.4bn relates to the planned sale of the retail banking operations in France in 2022.*
2 *Includes fair value movements on non-qualifying hedges and debit valuation adjustments on derivatives.*
3 *Comprises gains and losses relating to the business update in February 2020, including losses associated with the RWA reduction programme.*
4 *Includes impairment of software intangible assets of $128m (2021: $21m, 2020: $189m) of the total software intangible asset impairment of $147m (2021: $146m, 2020: $1,347m) and impairment of tangible assets of $332m (2021: $75m, 2020: $197m).*
5 *During 2020, The Saudi British Bank ('SABB'), an associate of HSBC, impaired the goodwill that arose following the merger with Alawwal bank in 2020. HSBC's post-tax share of the goodwill impairment was $462m.*

11 Trading assets

	2022	2021
	$m	$m
Treasury and other eligible bills	**22,897**	23,110
Debt securities	**78,126**	89,944
Equity securities	**88,026**	109,614
Trading securities	**189,049**	222,668
Loans and advances to banks[1]	**8,769**	7,767
Loans and advances to customers[1]	**20,275**	18,407
Year ended 31 Dec	**218,093**	248,842

1 Loans and advances to banks and customers include reverse repos, stock borrowing and other accounts.

12 Fair values of financial instruments carried at fair value

Control framework

Fair values are subject to a control framework designed to ensure that they are either determined or validated by a function independent of the risk taker.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is used. For inactive markets, HSBC sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process and are disaggregated into high-level categories including portfolio changes, market movements and other fair value adjustments.

The majority of financial instruments measured at fair value are in GBM. GBM's fair value governance structure comprises its Finance function, Valuation Committees and a Valuation Committee Review Group. Finance is responsible for establishing procedures governing valuation and ensuring fair values are in compliance with accounting standards. The fair values are reviewed by the Valuation Committees, which consist of independent support functions. These committees are overseen by the Valuation Committee Review Group, which considers all material subjective valuations.

Financial liabilities measured at fair value

In certain circumstances, HSBC records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based on quoted prices in an inactive market for the instrument or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread that is appropriate to HSBC's liabilities. The change in fair value of issued debt securities attributable to the Group's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using an appropriate market discount curve. The difference in the valuations is attributable to the Group's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instruments are reported as financial liabilities designated at fair value. The credit spread applied to these instruments is derived from the spreads at which HSBC issues structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by HSBC, recorded in other comprehensive income, reverse over the contractual life of the debt, provided that the debt is not repaid at a premium or a discount.

Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- Level 1 – valuation technique using quoted market price. These are financial instruments with quoted prices for identical instruments in active markets that HSBC can access at the measurement date.
- Level 2 – valuation technique using observable inputs. These are financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Level 3 – valuation technique with significant unobservable inputs. These are financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

Financial instruments carried at fair value and bases of valuation

	2022				2021			
	Level 1 $m	**Level 2 $m**	**Level 3 $m**	**Total $m**	Level 1 $m	Level 2 $m	Level 3 $m	Total $m
Recurring fair value measurements at 31 Dec								
Assets								
Trading assets	**148,592**	**64,684**	**4,817**	**218,093**	180,423	65,757	2,662	248,842
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**15,978**	**13,019**	**16,066**	**45,063**	17,937	17,629	14,238	49,804
Derivatives	**2,917**	**279,265**	**1,964**	**284,146**	2,783	191,621	2,478	196,882
Financial investments	**182,231**	**71,621**	**2,965**	**256,817**	247,745	97,838	3,389	348,972
Liabilities								
Trading liabilities	**44,787**	**27,092**	**474**	**72,353**	63,437	20,682	785	84,904
Financial liabilities designated at fair value	**1,130**	**115,765**	**10,432**	**127,327**	1,379	136,243	7,880	145,502
Derivatives	**2,400**	**280,444**	**2,920**	**285,764**	1,686	186,290	3,088	191,064

The table below provides the fair value levelling of assets held for sale and liabilities of disposal groups that have been classified as held for sale in accordance with IFRS 5. For further details, see Note 23.

Financial instruments carried at fair value and bases of valuation – assets and liabilities held for sale

	2022				2021			
	Level 1 $m	**Level 2 $m**	**Level 3 $m**	**Total $m**	Level 1 $m	Level 2 $m	Level 3 $m	Total $m
Recurring fair value measurements at 31 Dec								
Assets								
Trading assets	**2,932**	**244**	**—**	**3,176**	—	—	—	—
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**—**	**14**	**47**	**61**	—	—	—	—
Derivatives	**—**	**866**	**—**	**866**	—	—	—	—
Financial investments	**11,184**	**—**	**—**	**11,184**	—	—	—	—
Liabilities								
Trading liabilities	**2,572**	**182**	**—**	**2,754**	—	—	—	—
Financial liabilities designated at fair value	**—**	**3,523**	**—**	**3,523**	—	—	—	—
Derivatives	**—**	**813**	**—**	**813**	—	—	—	—

Transfers between Level 1 and Level 2 fair values

	Assets				**Liabilities**		
	Financial investments $m	**Trading assets $m**	**Designated and otherwise mandatorily measured at fair value $m**	**Derivatives $m**	**Trading liabilities $m**	**Designated at fair value $m**	**Derivatives $m**
At 31 Dec 2022							
Transfers from Level 1 to Level 2	**4,721**	**5,284**	**743**	**—**	**113**	**—**	**—**
Transfers from Level 2 to Level 1	**8,208**	**5,964**	**1,214**	**—**	**233**	**—**	**—**
At 31 Dec 2021							
Transfers from Level 1 to Level 2	8,477	6,553	1,277	103	181	—	212
Transfers from Level 2 to Level 1	6,007	4,132	768	—	638	—	—

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each quarterly reporting period. Transfers into and out of levels of the fair value hierarchy are primarily attributable to observability of valuation inputs and price transparency.

Fair value adjustments

We adopt the use of fair value adjustments when we take into consideration additional factors not incorporated within the valuation model that would otherwise be considered by a market participant. We classify fair value adjustments as either 'risk-related' or 'model-related'. The majority of these adjustments relate to GBM. Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement. For example, as models are enhanced, fair value adjustments may no longer be required. Similarly, fair value adjustments will decrease when the related positions are unwound, but this may not result in profit or loss.

Global Banking and Markets fair value adjustments

	2022		2021	
	GBM	**Corporate Centre**	GBM	Corporate Centre
	$m	**$m**	$m	$m
Type of adjustment				
Risk-related	**650**	**40**	868	42
– bid-offer	**426**	**—**	412	—
– uncertainty	**86**	**—**	66	1
– credit valuation adjustment	**245**	**35**	228	35
– debit valuation adjustment	**(175)**	**—**	(92)	—
– funding fair value adjustment	**68**	**5**	254	6
Model-related	**61**	**—**	57	—
– model limitation	**61**	**—**	57	—
Inception profit (Day 1 P&L reserves)	**97**	**—**	106	—
At 31 Dec	**808**	**40**	1,031	42

The reduction in fair value adjustments was driven by changes to derivative exposures and the credit environment, including HSBC's own credit.

Bid-offer

IFRS 13 'Fair Value Measurement' requires the use of the price within the bid-offer spread that is most representative of fair value. Valuation models will typically generate mid-market values. The bid-offer adjustment reflects the extent to which bid-offer costs would be incurred if substantially all residual net portfolio market risks were closed using available hedging instruments or by disposing of or unwinding the position.

Uncertainty

Certain model inputs may be less readily determinable from market data and/or the choice of model itself may be more subjective. In these circumstances, an adjustment may be necessary to reflect the likelihood that market participants would adopt more conservative values for uncertain parameters and/or model assumptions than those used in HSBC's valuation model.

Credit and debit valuation adjustments

The credit valuation adjustment ('CVA') is an adjustment to the valuation of over-the-counter ('OTC') derivative contracts to reflect the possibility that the counterparty may default and that HSBC may not receive the full market value of the transactions.

The debit valuation adjustment ('DVA') is an adjustment to the valuation of OTC derivative contracts to reflect the possibility that HSBC may default, and that it may not pay the full market value of the transactions.

HSBC calculates a separate CVA and DVA for each legal entity, and for each counterparty to which the entity has exposure. With the exception of central clearing parties, all third-party counterparties are included in the CVA and DVA calculations, and these adjustments are not netted across Group entities.

HSBC calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of HSBC, to HSBC's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, HSBC calculates the DVA by applying the PD of HSBC, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to HSBC and multiplying the result by the loss expected in the event of default. Both calculations are performed over the life of the potential exposure.

For most products HSBC uses a simulation methodology, which incorporates a range of potential exposures over the life of the portfolio, to calculate the expected positive exposure to a counterparty. The simulation methodology includes credit mitigants, such as counterparty netting agreements and collateral agreements with the counterparty.

The methodologies do not, in general, account for 'wrong-way risk'. Wrong-way risk is an adverse correlation between the counterparty's probability of default and the mark-to-market value of the underlying transaction. The risk can either be general, perhaps related to the currency of the issuer country, or specific to the transaction concerned. When there is significant wrong-way risk, a trade-specific approach is applied to reflect this risk in the valuation.

Funding fair value adjustment

The funding fair value adjustment ('FFVA') is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available, and is adjusted for events that may terminate the exposure, such as the default of HSBC or the counterparty. The FFVA and DVA are calculated independently.

Model limitation

Models used for portfolio valuation purposes may be based upon a simplified set of assumptions that do not capture all current and future material market characteristics. In these circumstances, model limitation adjustments are adopted.

Inception profit (Day 1 P&L reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs. The accounting for inception profit adjustments is discussed in Note 1.

Fair value valuation bases

Financial instruments measured at fair value using a valuation technique with significant unobservable inputs – Level 3

	Assets					Liabilities			
	Financial investments	Trading assets	Designated and otherwise mandatorily measured at fair value through profit or loss	Derivatives	Total	Trading liabilities	Designated at fair value	Derivatives	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Private equity including strategic investments	**647**	**19**	**15,652**	**—**	**16,318**	**92**	**—**	**—**	**92**
Asset-backed securities	**438**	**208**	**95**	**—**	**741**	**—**	**—**	**—**	**—**
Structured notes	**—**	**—**	**—**	**—**	**—**	**—**	**10,432**	**—**	**10,432**
Other derivatives	**—**	**—**	**—**	**1,964**	**1,964**	**—**	**—**	**2,920**	**2,920**
Other portfolios	**1,880**	**4,590**	**319**	**—**	**6,789**	**382**	**—**	**—**	**382**
At 31 Dec 2022	**2,965**	**4,817**	**16,066**	**1,964**	**25,812**	**474**	**10,432**	**2,920**	**13,826**
Private equity including strategic investments	544	2	13,732	—	14,278	9	—	—	9
Asset-backed securities	1,008	132	1	—	1,141	—	—	—	—
Structured notes	—	—	—	—	—	—	7,879	—	7,879
Other derivatives	—	—	—	2,478	2,478	—	—	3,088	3,088
Other portfolios	1,837	2,528	505	—	4,870	776	1	—	777
At 31 Dec 2021	3,389	2,662	14,238	2,478	22,767	785	7,880	3,088	11,753

Level 3 instruments are present in both ongoing and legacy businesses. Loans held for securitisation, derivatives with monolines, certain 'other derivatives' and predominantly all Level 3 asset-backed securities are legacy positions. HSBC has the capability to hold these positions.

Private equity including strategic investments

The fair value of a private equity investment (including strategic investments) is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors; by reference to market valuations for similar entities quoted in an active market; the price at which similar companies have changed ownership; or from published net asset values ('NAV') received. If necessary, adjustments are made to the NAV of funds to obtain the best estimate of fair value.

Asset-backed securities

While quoted market prices are generally used to determine the fair value of the asset-backed securities ('ABSs'), valuation models are used to substantiate the reliability of the limited market data available and to identify whether any adjustments to quoted market prices are required. For certain ABSs, such as residential mortgage-backed securities, the valuation uses an industry standard model with assumptions relating to prepayment speeds, default rates and loss severity based on collateral type, and performance, as appropriate. The valuations output is benchmarked for consistency against observable data for securities of a similar nature.

Structured notes

The fair value of Level 3 structured notes is derived from the fair value of the underlying debt security, and the fair value of the embedded derivative is determined as described in the paragraph below on derivatives. These structured notes comprise principally equity-linked notes issued by HSBC, which provide the counterparty with a return linked to the performance of equity securities and other portfolios.

Examples of the unobservable parameters include long-dated equity volatilities and correlations between equity prices, and interest and foreign exchange rates.

Derivatives

OTC derivative valuation models calculate the present value of expected future cash flows, based upon 'no arbitrage' principles. For many vanilla derivative products, the modelling approaches used are standard across the industry. For more complex derivative products, there may be some differences in market practice. Inputs to valuation models are determined from observable market data wherever possible, including prices available from exchanges, dealers, brokers or providers of consensus pricing. Certain inputs may not be observable in the market directly, but can be determined from observable prices via model calibration procedures or estimated from historical data or other sources.

Reconciliation of fair value measurements in Level 3 of the fair value hierarchy

Movement in Level 3 financial instruments

	Assets				Liabilities		
	Financial investments	Trading assets	Designated and otherwise mandatorily measured at fair value through profit or loss	Derivatives	Trading liabilities	Designated at fair value	Derivatives
	$m	$m	$m	$m	$m	$m	$m
At 1 Jan 2022	**3,389**	**2,662**	**14,238**	**2,478**	**785**	**7,880**	**3,088**
Total gains/(losses) recognised in profit or loss	**(4)**	**(245)**	**159**	**390**	**(52)**	**(1,334)**	**1,014**
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	**—**	**(245)**	**—**	**390**	**(52)**	**—**	**1,014**
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**—**	**—**	**159**	**—**	**—**	**(1,334)**	**—**
– gains less losses from financial investments at fair value through other comprehensive income	**(4)**	**—**	**—**	**—**	**—**	**—**	**—**
Total gains/(losses) recognised in other comprehensive income ('OCI')[1]	**(325)**	**(137)**	**(217)**	**(219)**	**(11)**	**(345)**	**(226)**
– financial investments: fair value gains/ (losses)	**(203)**	**—**	**—**	**—**	**—**	**82**	**—**
– exchange differences	**(122)**	**(137)**	**(217)**	**(219)**	**(11)**	**(427)**	**(226)**
Purchases	**1,048**	**3,436**	**4,330**	**—**	**178**	**—**	**—**
New issuances	**1**	**—**	**—**	**—**	**8**	**4,183**	**—**
Sales	**(245)**	**(1,102)**	**(783)**	**—**	**(152)**	**(94)**	**—**
Settlements	**(463)**	**(1,273)**	**(1,729)**	**(918)**	**(644)**	**182**	**(993)**
Transfers out	**(523)**	**(442)**	**(39)**	**(409)**	**(18)**	**(1,296)**	**(632)**
Transfers in	**87**	**1,918**	**107**	**642**	**380**	**1,256**	**669**
At 31 Dec 2022	**2,965**	**4,817**	**16,066**	**1,964**	**474**	**10,432**	**2,920**
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2021	**—**	**(100)**	**(148)**	**707**	**2**	**100**	**2,779**
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	**—**	**(100)**	**—**	**707**	**2**	**—**	**2,779**
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**—**	**—**	**(148)**	**—**	**—**	**100**	**—**
At 1 Jan 2021	3,654	2,499	11,477	2,670	162	5,306	4,188
Total gains/(losses) recognised in profit or loss	(10)	(378)	1,753	2,237	16	(836)	2,583
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	—	(378)	—	2,237	16	—	2,583
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	—	—	1,753	—	—	(836)	—
– gains less losses from financial investments at fair value through other comprehensive income	(10)	—	—	—	—	—	—
Total gains/(losses) recognised in other comprehensive income ('OCI')[1]	(521)	(18)	(285)	(27)	(8)	(61)	(26)
– financial investments: fair value gains/ (losses)	(428)	—	—	—	—	—	—
– exchange differences	(93)	(18)	(285)	(27)	(8)	(61)	(26)
Purchases	1,025	1,988	3,692	—	1,014	1	—
New issuances	—	—	—	—	35	5,969	—
Sales	(580)	(473)	(1,216)	—	(4)	(27)	—
Settlements	(336)	(747)	(1,049)	(2,347)	(681)	(2,922)	(3,962)
Transfers out	(383)	(1,027)	(184)	(418)	(7)	(704)	(734)
Transfers in	540	818	50	363	258	1,154	1,039
At 31 Dec 2021	3,389	2,662	14,238	2,478	785	7,880	3,088
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2020	—	(309)	1,509	1,298	—	166	(969)
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	—	(309)	—	1,298	—	—	(969)
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	—	—	1,509	—	—	166	—

1 *Included in 'financial investments: fair value gains/(losses)' in the current year and 'exchange differences' in the consolidated statement of comprehensive income.*

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each quarterly reporting period. Transfers into and out of levels of the fair value hierarchy are primarily attributable to observability of valuation inputs and price transparency.

Effect of changes in significant unobservable assumptions to reasonably possible alternatives

Sensitivity of fair values to reasonably possible alternative assumptions

	2022				2021			
	Reflected in profit or loss		Reflected in OCI		Reflected in profit or loss		Reflected in OCI	
	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes
	$m	$m	$m	$m	$m	$m	$m	$m
Derivatives, trading assets and trading liabilities[1]	264	(291)	—	—	143	(146)	—	—
Financial assets and liabilities designated and otherwise mandatorily measured at fair value through profit or loss	914	(911)	—	—	849	(868)	—	—
Financial investments	11	(11)	65	(55)	20	(20)	113	(112)
At 31 Dec	1,189	(1,213)	65	(55)	1,012	(1,034)	113	(112)

1 *'Derivatives, trading assets and trading liabilities' are presented as one category to reflect the manner in which these instruments are risk-managed.*

The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval. Methodologies take account of the nature of the valuation technique employed, as well as the availability and reliability of observable proxy and historical data.

When the fair value of a financial instrument is affected by more than one unobservable assumption, the above table reflects the most favourable or the most unfavourable change from varying the assumptions individually.

Key unobservable inputs to Level 3 financial instruments

The following table lists key unobservable inputs to Level 3 financial instruments and provides the range of those inputs at 31 December 2022.

Quantitative information about significant unobservable inputs in Level 3 valuations

	Fair value				2022		2021	
	Assets	Liabilities	Valuation techniques	Key unobservable inputs	Full range of inputs		Full range of inputs	
	$m	$m			Lower	Higher	Lower	Higher
Private equity including strategic investments	16,318	92	See below	See below				
Asset-backed securities	741	—						
– collateralised loan/debt obligation	188	—	Market proxy	Bid quotes	—	92	—	100
– other ABSs	553	—	Market proxy	Bid quotes	—	99	—	100
Structured notes	—	10,432						
– equity-linked notes	—	6,833	Model – Option model	Equity volatility	6%	142%	6%	124%
			Model – Option model	Equity correlation	32%	99%	22%	99%
– Foreign exchange-linked notes	—	2,694	Model – Option model	Foreign exchange volatility	3%	37%	1%	99%
– other	—	905						
Derivatives	1,964	2,920						
– interest rate derivatives	560	710						
securitisation swaps	259	209	Model – Discounted cash flow	Prepayment rate	5%	10%	5%	10%
long-dated swaptions	53	67	Model – Option model	Interest rate volatility	8%	53%	15%	35%
other	248	434						
– Foreign exchange derivatives	445	304						
Foreign exchange options	404	274	Model – Option model	Foreign exchange volatility	1%	46%	1%	99%
other	41	30						
– equity derivatives	850	1,658						
long-dated single stock options	415	502	Model – Option model	Equity volatility	7%	153%	4%	138%
other	435	1,156						
– credit derivatives	109	248						
Other portfolios	6,789	382						
– repurchase agreements	750	328	Model – Discounted cash flow	Interest rate curve	1%	9%	1%	5%
– other[1]	6,039	54						
At 31 Dec 2022	25,812	13,826						

1 *'Other' includes a range of smaller asset holdings.*

Private equity including strategic investments

Given the bespoke nature of the analysis in respect of each private equity holding, it is not practical to quote a range of key unobservable inputs. The key unobservable inputs would be price and correlation. The valuation approach includes using a range of inputs that include company specific financials, traded comparable companies multiples, published net asset values and qualitative assumptions, which are not directly comparable or quantifiable.

Prepayment rates

Prepayment rates are a measure of the anticipated future speed at which a loan portfolio will be repaid in advance of the due date. They vary according to the nature of the loan portfolio and expectations of future market conditions, and may be estimated using a variety of evidence, such as prepayment rates implied from proxy observable security prices, current or historical prepayment rates and macroeconomic modelling.

Market proxy

Market proxy pricing may be used for an instrument when specific market pricing is not available but there is evidence from instruments with common characteristics. In some cases it might be possible to identify a specific proxy, but more generally evidence across a wider range of instruments will be used to understand the factors that influence current market pricing and the manner of that influence.

Volatility

Volatility is a measure of the anticipated future variability of a market price. It varies by underlying reference market price, and by strike and maturity of the option. Certain volatilities, typically those of a longer-dated nature, are unobservable and are estimated from observable data. The range of unobservable volatilities reflects the wide variation in volatility inputs by reference market price. The core range is significantly narrower than the full range because these examples with extreme volatilities occur relatively rarely within the HSBC portfolio.

Correlation

Correlation is a measure of the inter-relationship between two market prices and is expressed as a number between minus one and one. It is used to value more complex instruments where the payout is dependent upon more than one market price. There is a wide range of instruments for which correlation is an input, and consequently a wide range of both same-asset correlations and cross-asset correlations is used. In general, the range of same-asset correlations will be narrower than the range of cross-asset correlations.

Unobservable correlations may be estimated based upon a range of evidence, including consensus pricing services, HSBC trade prices, proxy correlations and examination of historical price relationships. The range of unobservable correlations quoted in the table reflects the wide variation in correlation inputs by market price pair.

Credit spread

Credit spread is the premium over a benchmark interest rate required by the market to accept lower credit quality. In a discounted cash flow model, the credit spread increases the discount factors applied to future cash flows, thereby reducing the value of an asset. Credit spreads may be implied from market prices and may not be observable in more illiquid markets.

Inter-relationships between key unobservable inputs

Key unobservable inputs to Level 3 financial instruments may not be independent of each other. As described above, market variables may be correlated. This correlation typically reflects the manner in which different markets tend to react to macroeconomic or other events. Furthermore, the effect of changing market variables on the HSBC portfolio will depend on HSBC's net risk position in respect of each variable.

HSBC Holdings

Basis of valuing HSBC Holdings' financial assets and liabilities measured at fair value

	2022	2021
	$m	$m
Valuation technique using observable inputs: Level 2		
Assets at 31 Dec		
– derivatives	**3,801**	2,811
– designated and otherwise mandatorily measured at fair value through profit or loss	**52,322**	51,408
Liabilities at 31 Dec		
– designated at fair value	**32,123**	32,418
– derivatives	**6,922**	1,220

13 Fair values of financial instruments not carried at fair value

Fair values of financial instruments not carried at fair value and bases of valuation

		Fair value			
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
	$m	$m	$m	$m	$m
At 31 Dec 2022					
Assets					
Loans and advances to banks	**104,882**	**—**	**104,074**	**814**	**104,888**
Loans and advances to customers	**924,854**	**—**	**8,768**	**904,288**	**913,056**
Reverse repurchase agreements – non-trading	**253,754**	**—**	**253,668**	**—**	**253,668**
Financial investments – at amortised cost	**168,746**	**90,629**	**67,419**	**626**	**158,674**
Liabilities					
Deposits by banks	**66,722**	**—**	**66,831**	**—**	**66,831**
Customer accounts	**1,570,303**	**—**	**1,570,209**	**—**	**1,570,209**
Repurchase agreements – non-trading	**127,747**	**—**	**127,500**	**—**	**127,500**
Debt securities in issue	**78,149**	**—**	**76,640**	**381**	**77,021**
Subordinated liabilities	**22,290**	**—**	**22,723**	**—**	**22,723**
At 31 Dec 2021					
Assets					
Loans and advances to banks	83,136	—	82,220	1,073	83,293
Loans and advances to customers	1,045,814	—	10,287	1,034,288	1,044,575
Reverse repurchase agreements – non-trading	241,648	—	241,531	121	241,652
Financial investments – at amortised cost	97,302	38,722	63,022	523	102,267
Liabilities					
Deposits by banks	101,152	—	101,149	—	101,149
Customer accounts	1,710,574	—	1,710,733	—	1,710,733
Repurchase agreements – non-trading	126,670	—	126,670	—	126,670
Debt securities in issue	78,557	—	78,754	489	79,243
Subordinated liabilities	20,487	—	26,206	—	26,206

Fair values of financial instruments not carried at fair value and bases of valuation – assets and disposal groups held for sale

		Fair value			
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
	$m	$m	$m	$m	$m
At 31 Dec 2022					
Assets					
Loans and advances to banks	**253**	**—**	**257**	**—**	**257**
Loans and advances to customers	**80,687**	**—**	**111**	**78,048**	**78,159**
Reverse repurchase agreements – non-trading	**4,646**	**—**	**4,646**	**—**	**4,646**
Financial investments – at amortised cost	**6,165**	**6,042**	**—**	**—**	**6,042**
Liabilities					
Deposits by banks	**64**	**—**	**64**	**—**	**64**
Customer accounts	**85,274**	**—**	**85,303**	**—**	**85,303**
Repurchase agreements – non-trading	**3,266**	**—**	**3,266**	**—**	**3,266**
Debt securities in issue	**12,928**	**—**	**12,575**	**—**	**12,575**
Subordinated liabilities	**8**	**—**	**7**	**—**	**7**
At 31 Dec 2021					
Assets					
Loans and advances to banks	3	—	3	—	3
Loans and advances to customers	3,056	—	363	2,808	3,171
Liabilities					
Deposits by banks	87	—	87	—	87
Customer accounts	8,750	—	8,750	—	8,750

Other financial instruments not carried at fair value are typically short term in nature and reprice to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. They include cash and balances at central banks, items in the course of collection from and transmission to other banks, Hong Kong Government certificates of indebtedness and Hong Kong currency notes in circulation, all of which are measured at amortised cost.

Valuation

Fair value is an estimate of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It does not reflect the economic benefits and costs that HSBC expects to flow from an instrument's cash flow over its expected future life. Our valuation methodologies and assumptions in determining fair values for which no observable market prices are available may differ from those of other companies.

Loans and advances to banks and customers

To determine the fair value of loans and advances to banks and customers, loans are segregated, as far as possible, into portfolios of similar characteristics. Fair values are based on observable market transactions, when available. When they are unavailable, fair values are estimated using valuation models incorporating a range of input assumptions. These assumptions may include: value estimates from third-party brokers reflecting over-the-counter trading activity; forward-looking discounted cash flow models, taking account of expected customer prepayment rates, using assumptions that HSBC believes are consistent with those that would be used by market participants in valuing such loans; new business rates estimates for similar loans; and trading inputs from other market participants including observed primary and secondary trades. From time to time, we may engage a third-party valuation specialist to measure the fair value of a pool of loans.

The fair value of loans reflects expected credit losses at the balance sheet date and estimates of market participants' expectations of credit losses over the life of the loans, and the fair value effect of repricing between origination and the balance sheet date. For credit-impaired loans, fair value is estimated by discounting the future cash flows over the time period they are expected to be recovered.

Financial investments

The fair values of listed financial investments are determined using bid market prices. The fair values of unlisted financial investments are determined using valuation techniques that incorporate the prices and future earnings streams of equivalent quoted securities.

Deposits by banks and customer accounts

The fair values of on-demand deposits are approximated by their carrying value. For deposits with longer-term maturities, fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities.

Debt securities in issue and subordinated liabilities

Fair values in debt securities in issue and subordinated liabilities are determined using quoted market prices at the balance sheet date where available, or by reference to quoted market prices for similar instruments.

Repurchase and reverse repurchase agreements – non-trading

Fair values of repurchase and reverse repurchase agreements that are held on a non-trading basis provide approximate carrying amounts. This is due to the fact that balances are generally short dated.

HSBC Holdings

The methods used by HSBC Holdings to determine fair values of financial instruments for the purposes of measurement and disclosure are described above.

Fair values of HSBC Holdings' financial instruments not carried at fair value on the balance sheet

	2022		2021	
	Carrying amount	**Fair value[1]**	Carrying amount	Fair value[1]
	$m	**$m**	$m	$m
Assets at 31 Dec				
Loans and advances to HSBC undertakings	**26,765**	**26,962**	25,108	25,671
Financial investments – at amortised cost	**19,466**	**19,314**	26,194	26,176
Liabilities at 31 Dec				
Debt securities in issue	**66,938**	**65,364**	67,483	69,719
Subordinated liabilities	**19,727**	**20,644**	17,059	21,066

1 *Fair values (other than Level 1 financial investments) were determined using valuation techniques with observable inputs (Level 2).*

14 Financial assets designated and otherwise mandatorily measured at fair value through profit or loss

	2022			2021		
	Designated at fair value	**Mandatorily measured at fair value**	**Total**	Designated at fair value	Mandatorily measured at fair value	Total
	$m	**$m**	**$m**	$m	$m	$m
Securities	**3,079**	**38,529**	**41,608**	2,251	42,062	44,313
– treasury and other eligible bills	**649**	**95**	**744**	599	31	630
– debt securities	**2,430**	**3,969**	**6,399**	1,652	5,177	6,829
– equity securities	**—**	**34,465**	**34,465**	—	36,854	36,854
Loans and advances to banks and customers	**—**	**1,841**	**1,841**	—	4,307	4,307
Other	**—**	**1,614**	**1,614**	—	1,184	1,184
At 31 Dec	**3,079**	**41,984**	**45,063**	2,251	47,553	49,804

15 Derivatives

Notional contract amounts and fair values of derivatives by product contract type held by HSBC

	Notional contract amount		Fair value – Assets			Fair value – Liabilities		
	Trading	Hedging	Trading	Hedging	Total	Trading	Hedging	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Foreign exchange	**8,434,453**	**38,924**	**122,203**	**525**	**122,728**	**123,088**	**166**	**123,254**
Interest rate	**15,213,232**	**276,589**	**285,438**	**5,066**	**290,504**	**287,877**	**3,501**	**291,378**
Equities	**570,410**	**—**	**9,325**	**—**	**9,325**	**9,176**	**—**	**9,176**
Credit	**183,995**	**—**	**1,091**	**—**	**1,091**	**1,264**	**—**	**1,264**
Commodity and other	**78,413**	**—**	**1,485**	**—**	**1,485**	**1,679**	**—**	**1,679**
Gross total fair values	**24,480,503**	**315,513**	**419,542**	**5,591**	**425,133**	**423,084**	**3,667**	**426,751**
Offset (Note 31)					**(140,987)**			**(140,987)**
At 31 Dec 2022	**24,480,503**	**315,513**	**419,542**	**5,591**	**284,146**	**423,084**	**3,667**	**285,764**
Foreign exchange	7,723,034	43,839	79,801	1,062	80,863	77,670	207	77,877
Interest rate	14,470,539	162,921	151,631	1,749	153,380	146,808	966	147,774
Equities	659,142	—	12,637	—	12,637	14,379	—	14,379
Credit	190,724	—	2,175	—	2,175	3,151	—	3,151
Commodity and other	74,159	—	1,205	—	1,205	1,261	—	1,261
Gross total fair values	23,117,598	206,760	247,449	2,811	250,260	243,269	1,173	244,442
Offset (Note 31)					(53,378)			(53,378)
At 31 Dec 2021	23,117,598	206,760	247,449	2,811	196,882	243,269	1,173	191,064

The notional contract amounts of derivatives held for trading purposes and derivatives designated in hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date. They do not represent amounts at risk.

Derivative assets and liabilities increased during 2022, driven by yield curve movements and changes in foreign exchange rates.

Notional contract amounts and fair values of derivatives by product contract type held by HSBC Holdings with subsidiaries

	Notional contract amount		Assets			Liabilities		
	Trading	Hedging	Trading	Hedging	Total	Trading	Hedging	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Foreign exchange	**60,630**	**—**	**502**	**—**	**502**	**1,683**	**—**	**1,683**
Interest rate	**34,322**	**81,873**	**2,386**	**913**	**3,299**	**826**	**4,413**	**5,239**
At 31 Dec 2022	**94,952**	**81,873**	**2,888**	**913**	**3,801**	**2,509**	**4,413**	**6,922**
Foreign exchange	36,703	—	384	—	384	377	—	377
Interest rate	35,970	45,358	712	1,715	2,427	769	74	843
At 31 Dec 2021	72,673	45,358	1,096	1,715	2,811	1,146	74	1,220

Use of derivatives

For details regarding the use of derivatives, see page 220 under 'Market risk'.

Trading derivatives

Most of HSBC's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making and risk management. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenue based on spread and volume. Risk management activity is undertaken to manage the risk arising from client transactions, with the principal purpose of retaining client margin. Other derivatives classified as held for trading include non-qualifying hedging derivatives.

Substantially all of HSBC Holdings' derivatives entered into with subsidiaries are managed in conjunction with financial liabilities designated at fair value.

Derivatives valued using models with unobservable inputs

The difference between the fair value at initial recognition (the transaction price) and the value that would have been derived had valuation techniques used for subsequent measurement been applied at initial recognition, less subsequent releases, is as shown in the following table:

Unamortised balance of derivatives valued using models with significant unobservable inputs

	2022	2021
	$m	$m
Unamortised balance at 1 Jan	**106**	104
Deferral on new transactions	**191**	311
Recognised in the income statement during the year:	**(192)**	(308)
– amortisation	**(112)**	(177)
– subsequent to unobservable inputs becoming observable	**(3)**	(4)
– maturity, termination or offsetting derivative	**(77)**	(127)
Exchange differences	**(8)**	(1)
Unamortised balance at 31 Dec[1]	**97**	106

1 *This amount is yet to be recognised in the consolidated income statement.*

Hedge accounting derivatives

HSBC applies hedge accounting to manage the following risks: interest rate and foreign exchange risks. Further details on how these risks arise and how they are managed by the Group can be found in the 'Risk review'.

Hedged risk components

HSBC designates a portion of cash flows of a financial instrument or a group of financial instruments for a specific interest rate or foreign currency risk component in a fair value or cash flow hedge. The designated risks and portions are either contractually specified or otherwise separately identifiable components of the financial instrument that are reliably measurable. Risk-free or benchmark interest rates generally are regarded as being both separately identifiable and reliably measurable, except for the Interest Rate Benchmark Reform Phase 2 transition where HSBC designates alternative benchmark rates as the hedged risk which may not have been separately identifiable upon initial designation, provided HSBC reasonably expects it will meet the requirement within 24 months from the first designation date. The designated risk components account for a significant portion of the overall changes in fair value or cash flows of the hedged items.

HSBC uses net investment hedges to hedge the structural foreign exchange risk related to net investments in foreign operations including subsidiaries and branches whose functional currencies are different from that of the parent. When hedging with foreign exchange forward contracts, the spot rate component of the foreign exchange risk is designated as the hedged risk.

Fair value hedges

HSBC enters into fixed-for-floating-interest-rate swaps to manage the exposure to changes in fair value caused by movements in market interest rates on certain fixed-rate financial instruments that are not measured at fair value through profit or loss, including debt securities held and issued.

HSBC hedging instrument by hedged risk

	Hedging instrument				
		Carrying amount			
Hedged risk	Notional amount[1] $m	Assets $m	Liabilities $m	Balance sheet presentation	Change in fair value[2] $m
Interest rate[3]	**162,062**	**4,973**	**2,573**	**Derivatives**	**4,064**
At 31 Dec 2022	**162,062**	**4,973**	**2,573**		**4,064**
Interest rate[3]	90,556	1,637	1,410	Derivatives	1,330
At 31 Dec 2021	90,556	1,637	1,410		1,330

1 *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date. They do not represent amounts at risk.*
2 *Used in effectiveness testing, which uses the full fair value change of the hedging instrument not excluding any component.*
3 *The hedged risk 'interest rate' includes inflation risk.*

HSBC hedged item by hedged risk

	Hedged item						Ineffectiveness	
	Carrying amount		Accumulated fair value hedge adjustments included in carrying amount[2]			Change in fair value[1]	Recognised in profit and loss	
Hedged risk	Assets $m	Liabilities $m	Assets $m	Liabilities $m	Balance sheet presentation	$m	$m	Profit and loss presentation
Interest rate[3]	**82,792**		**(5,100)**		**Financial investments measured at fair value through other comprehensive income**	**(8,005)**	**(59)**	**Net income from financial instruments held for trading or managed on a fair value basis**
	3,415		**(210)**		**Loans and advances to customers**	**(233)**		
	519		**(18)**		**Reverse repos**	**(17)**		
		49,180		**(2,006)**	**Debt securities in issue**	**4,138**		
		83		**—**	**Deposits by banks**	**(5)**		
At 31 Dec 2022	**86,726**	**49,263**	**(5,328)**	**(2,006)**		**(4,122)**	**(59)**	
Interest rate[3]	68,059		1,199		Financial assets designated and otherwise mandatorily measured at fair value through other comprehensive income	(1,932)	(36)	Net income from financial instruments held for trading or managed on a fair value basis
	2		(3)		Loans and advances to banks	(3)		
	3,066		9		Loans and advances to customers	(41)		
		14,428		992	Debt securities in issue	609		
		86		1	Deposits by banks	1		
At 31 Dec 2021	71,127	14,514	1,205	993		(1,366)	(36)	

1 *Used in effectiveness testing, which comprise an amount attributable to the designated hedged risk that can be a risk component.*
2 *The accumulated amount of fair value adjustments remaining in the statement of financial position for hedged items that have ceased to be adjusted for hedging gains and losses were assets of $252m (2021: $1,061m) for FVOCI assets and liabilities of $916m (2021: $15m) for debt issued.*
3 *The hedged risk 'interest rate' includes inflation risk.*

HSBC Holdings hedging instrument by hedged risk

	Hedging instrument				
		Carrying amount			
Hedged risk	Notional amount[1,4] $m	Assets $m	Liabilities $m	Balance sheet presentation	Change in fair value[2] $m
Interest rate[3]	**81,873**	**913**	**4,413**	**Derivatives**	**(5,599)**
At 31 Dec 2022	**81,873**	**913**	**4,413**		**(5,599)**
Interest rate[3]	45,358	1,715	74	Derivatives	(1,515)
At 31 Dec 2021	45,358	1,715	74		(1,515)

1 *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.*
2 *Used in effectiveness testing; comprising the full fair value change of the hedging instrument not excluding any component.*
3 *The hedged risk 'interest rate' includes foreign exchange risk.*
4 *The notional amount of non-dynamic fair value hedges is equal to $81,873m (2021: $45,358m), of which the weighted-average maturity date is June 2028 and the weighted-average swap rate is 2.33% (2021: 1.30%). The majority of these hedges are internal to the Group.*

HSBC Holdings hedged item by hedged risk

	Hedged item						Ineffectiveness	
	Carrying amount		Accumulated fair value hedge adjustments included in carrying amount[2]			Change in fair value[1]	Recognised in profit and loss	
Hedged risk	Assets $m	Liabilities $m	Assets $m	Liabilities $m	Balance sheet presentation	$m	$m	Profit and loss presentation
Interest rate[3]		**68,223**		**(3,829)**	**Debt securities in issue**	**6,258**	**(34)**	**Net income from financial instruments held for trading or managed on a fair value basis**
	6,812		**(789)**		**Loans and advances to banks**	**(693)**		
At 31 Dec 2022	**6,812**	**68,223**	**(789)**	**(3,829)**		**5,565**	**(34)**	
Interest rate[3]		39,154		1,408	Debt securities in issue	1,599	(21)	Net income from financial instruments held for trading or managed on a fair value basis
	7,863		(104)		Loans and advances to banks	(104)		
At 31 Dec 2021	7,863	39,154	(104)	1,408		1,495	(21)	

1 *Used in effectiveness testing; comprising amount attributable to the designated hedged risk that can be a risk component.*
2 *The accumulated amount of fair value adjustments remaining in the statement of financial position for hedged items that have ceased to be adjusted for hedging gains and losses were liabilities of $971m (2021: $54.4m) for debt issued.*
3 *The hedged risk 'interest rate' includes foreign exchange risk.*

Sources of hedge ineffectiveness may arise from basis risk, including but not limited to the discount rates used for calculating the fair value of derivatives, hedges using instruments with a non-zero fair value, and notional and timing differences between the hedged items and hedging instruments.

For some debt securities held, HSBC manages interest rate risk in a dynamic risk management strategy. The assets in scope of this strategy are high-quality fixed-rate debt securities, which may be sold to meet liquidity and funding requirements.

The interest rate risk of the HSBC fixed-rate debt securities issued is managed in a non-dynamic risk management strategy.

Cash flow hedges

HSBC's cash flow hedging instruments consist principally of interest rate swaps and cross-currency swaps that are used to manage the variability in future interest cash flows of non-trading financial assets and liabilities, arising due to changes in market interest rates and foreign-currency basis.

HSBC applies macro cash flow hedging for interest rate risk exposures on portfolios of replenishing current and forecasted issuances of non-trading assets and liabilities that bear interest at variable rates, including rolling such instruments. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate cash flows representing both principal balances and interest cash flows across all portfolios are used to determine the effectiveness and ineffectiveness. Macro cash flow hedges are considered to be dynamic hedges.

HSBC also hedges the variability in future cash flows on foreign-denominated financial assets and liabilities arising due to changes in foreign exchange market rates with cross-currency swaps, which are considered dynamic hedges.

Hedging instrument by hedged risk

	Hedging instrument				Hedged item		Ineffectiveness	
	Carrying amount							
Hedged risk	Notional amount[1] $m	Assets $m	Liabilities $m	Balance sheet presentation	Change in fair value[2] $m	Change in fair value[3] $m	Recognised in profit and loss $m	Profit and loss presentation
Foreign currency	**8,781**	**418**	**166**	**Derivatives**	**659**	**659**	**—**	**Net income from financial instruments held for trading or managed on a fair value basis**
Interest rate	**114,527**	**93**	**950**	**Derivatives**	**(4,997)**	**(4,973)**	**(24)**	
At 31 Dec 2022	**123,308**	**511**	**1,116**		**(4,338)**	**(4,314)**	**(24)**	
Foreign currency	17,930	827	207	Derivatives	987	987	—	Net income from financial instruments held for trading or managed on a fair value basis
Interest rate	72,365	112	217	Derivatives	(519)	(500)	(19)	
At 31 Dec 2021	90,295	939	424		468	487	(19)	

1 *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date. They do not represent amounts at risk.*
2 *Used in effectiveness testing; comprising the full fair value change of the hedging instrument not excluding any component.*
3 *Used in effectiveness assessment; comprising amount attributable to the designated hedged risk that can be a risk component.*

Sources of hedge ineffectiveness may arise from basis risk, including but not limited to timing differences between the hedged items and hedging instruments and hedges using instruments with a non-zero fair value.

Reconciliation of equity and analysis of other comprehensive income by risk type

	Interest rate $m	Foreign currency $m
Cash flow hedging reserve at 1 Jan 2022	**8**	**(205)**
Fair value gains/(losses)	**(4,973)**	**659**
Fair value (gains)/losses reclassified from the cash flow hedge reserve to the income statement in respect of:		
Hedged items that have affected profit or loss[1]	**325**	**(926)**
Income taxes	**1,123**	**28**
Others	**130**	**23**
Cash flow hedging reserve at 31 Dec 2022	**(3,387)**	**(421)**
Cash flow hedging reserve at 1 Jan 2021	495	(37)
Fair value gains/(losses)	(500)	987
Fair value (gains)/losses reclassified from the cash flow hedge reserve to the income statement in respect of:		
Hedged items that have affected profit or loss	(217)	(1,177)
Income taxes	185	25
Others	45	(3)
Cash flow hedging reserve at 31 Dec 2021	8	(205)

1 *Hedged items that have affected profit or loss are primarily recorded within interest income.*

Net investment hedges

The Group applies hedge accounting in respect of certain net investments in non-US dollar functional currency foreign operations for changes in spot exchange rates only. Hedging could be undertaken for Group structural exposure to changes in the US dollar to foreign currency exchange rates using forward foreign exchange contracts or by financing with foreign currency borrowings. The aggregate positions at the reporting date and the performance indicators of both live and de-designated hedges are summarised below. There were no amounts reclassified to the profit and loss account during the accounting periods presented.

Hedges of net investment in foreign operations

	Carrying value				
Description of hedged risk	**Derivative assets $m**	**Derivative liabilities $m**	**Nominal amount $m**	**Amounts recognised in OCI $m**	**Hedge ineffectiveness recognised in income statement $m**
2022					
Pound sterling-denominated structural foreign exchange	**264**	**—**	**14,000**	**1,447**	**—**
Swiss franc-denominated structural foreign exchange	**—**	**(21)**	**727**	**111**	**—**
Hong Kong dollar-denominated structural foreign exchange	**—**	**(19)**	**4,597**	**(2)**	**—**
Other structural foreign exchange[1]	**—**	**(117)**	**10,819**	**375**	**—**
Total	**264**	**(157)**	**30,143**	**1,931**	**—**
2021					
Pound sterling-denominated structural foreign exchange	229	—	15,717	(126)	—
Swiss franc-denominated structural foreign exchange	—	(8)	809	101	—
Hong Kong dollar-denominated structural foreign exchange	7	—	4,992	5	—
Other structural foreign exchange[1]	7	—	4,387	6	—
Total	243	(8)	25,906	(14)	—

1 *Other currencies include New Taiwan dollar, Singapore dollar, Canadian dollar, Omani rial, South Korean won, Indian rupee, Indonesian rupiah, euro, Mexican peso, Qatari riyal, Kuwaiti dinar, Saudi riyal and United Arab Emirates dirham.*

Interest rate benchmark reform: Amendments to IFRS 9 and IAS 39 'Financial Instruments'

HSBC has applied both the first set of amendments ('Phase 1') and the second set of amendments ('Phase 2') to IFRS 9 and IAS 39 applicable to hedge accounting. The hedge accounting relationships that are affected by Phase 1 and Phase 2 amendments are presented in the balance sheet as 'Financial assets designated and otherwise mandatorily measured at fair value through other comprehensive income', 'Loans and advances to customers', 'Debt securities in issue' and 'Deposits by banks'. The notional value of the derivatives impacted by the Ibor reform, including those designated in hedge accounting relationships, is disclosed on page 138 in the section 'Financial instruments impacted by the Ibor reform'. For further details on Ibor transition, see 'Top and emerging risks' on page 137.

During 2022, the Group transitioned all of its hedging instruments referencing sterling Libor, European Overnight Index Average rate ('Eonia') and Japanese yen Libor. The Group also transitioned some of the hedging instruments referencing US dollar Libor. There is no significant judgement applied for these benchmarks to determine whether and when the transition uncertainty has been resolved.

The most significant Ibor benchmark in which the Group continues to have hedging instruments is US dollar Libor. It is expected that the transition out of US dollar Libor hedging derivatives will be completed by the second quarter of 2023. These transitions do not necessitate new approaches compared with any of the mechanisms used so far for transition and it will not be necessary to change the transition risk management strategy.

For some of the Ibors included under the 'Other' header in the table below, judgement has been needed to establish whether a transition is required, since there are Ibor benchmarks that are subject to computation methodology improvements and insertion of fallback provisions without full clarity being provided by their administrators on whether these Ibor benchmarks will be demised.

The notional amounts of interest rate derivatives designated in hedge accounting relationships do not represent the extent of the risk exposure managed by the Group but they are expected to be directly affected by market-wide Ibor reform and in scope of Phase 1 amendments and are shown in the table below. The cross-currency swaps designated in hedge accounting relationships and affected by Ibor reform are not significant and have not been presented below.

Hedging instrument impacted by Ibor reform

	Hedging instrument						
	Impacted by Ibor reform					Not impacted by Ibor reform	Notional amount[1]
	€[2] $m	£ $m	$ $m	Other[3] $m	Total $m	$m	$m
Fair value hedges	**12,756**	**—**	**2,015**	**12,643**	**27,414**	**134,648**	**162,062**
Cash flow hedges	**8,865**	**—**	**—**	**27,830**	**36,695**	**77,832**	**114,527**
At 31 Dec 2022	**21,621**	**—**	**2,015**	**40,473**	**64,109**	**212,480**	**276,589**
Fair value hedges	6,178	—	18,525	6,615	31,318	59,238	90,556
Cash flow hedges	7,954	—	100	8,632	16,686	55,679	72,365
At 31 Dec 2021	14,132	—	18,625	15,247	48,004	114,917	162,921

1 *The notional contract amounts of interest rate derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date and they do not represent amounts at risk.*
2 *The notional contract amounts of euro interest rate derivatives impacted by Ibor reform mainly comprise hedges with a Euribor benchmark, which are 'Fair value hedges' of $12,756m (31 December 2021: $6,178m) and 'Cash flow hedges' of $8,865m (31 December 2021: $7,954m).*
3 *Other benchmarks impacted by Ibor reform comprise mainly of Canadian dollar offered rate ('CDOR'), Hong Kong interbank offered rate ('HIBOR') and Mexican interbank equilibrium interest rate ('TIIE') related derivatives.*

Hedging instrument impacted by Ibor reform held by HSBC Holdings

	Hedging instrument						
	Impacted by Ibor reform					Not impacted by Ibor reform	Notional amount
	€ $m	£ $m	$ $m	Other $m	Total $m	$m	$m
Fair value hedges	**15,210**	**—**	**2,000**	**1,336**	**18,546**	**63,327**	**81,873**
At 31 Dec 2022	**15,210**	**—**	**2,000**	**1,336**	**18,546**	**63,327**	**81,873**
Fair value hedges	9,944	—	20,035	1,458	31,437	13,921	45,358
At 31 Dec 2021	9,944	—	20,035	1,458	31,437	13,921	45,358

16 Financial investments

Carrying amount of financial investments

	2022 $m	2021 $m
Financial investments measured at fair value through other comprehensive income	**256,817**	348,972
– treasury and other eligible bills	**86,749**	100,158
– debt securities	**168,264**	246,998
– equity securities	**1,696**	1,770
– other instruments	**108**	46
Debt instruments measured at amortised cost	**168,747**	97,302
– treasury and other eligible bills	**35,282**	21,634
– debt securities	**133,465**	75,668
At 31 Dec	**425,564**	446,274

Equity instruments measured at fair value through other comprehensive income

Type of equity instruments	Fair value $m	Dividends recognised $m
Investments required by central institutions	**690**	**24**
Business facilitation	**954**	**28**
Others	**52**	**2**
At 31 Dec 2022	**1,696**	**54**
Investments required by central institutions	766	17
Business facilitation	954	24
Others	50	3
At 31 Dec 2021	1,770	44

Weighted average yields of investment debt securities

	Up to 1 year Yield %	1 to 5 years Yield %	5 to 10 years Yield %	Over 10 years Yield %
Debt securities measured at fair value through other comprehensive income				
US Treasury	**1.0**	**1.3**	**1.3**	**2.3**
US Government agencies	**4.7**	**0.9**	**3.2**	**2.5**
US Government-sponsored agencies	**1.1**	**1.7**	**2.1**	**1.7**
UK Government	**0.5**	**0.8**	**0.4**	**1.3**
Hong Kong Government	**1.3**	**1.6**	**1.7**	**—**
Other governments	**2.3**	**3.0**	**2.9**	**3.7**
Asset-backed securities	**6.7**	**0.2**	**2.7**	**2.4**
Corporate debt and other securities	**3.4**	**1.8**	**2.5**	**2.2**
Debt securities measured at amortised cost				
US Treasury	**10.2**	**3.4**	**3.8**	**2.8**
US Government agencies	**—**	**2.9**	**7.2**	**3.2**
US Government-sponsored agencies	**2.9**	**2.4**	**3.2**	**3.3**
UK Government	**—**	**—**	**0.7**	**0.9**
Hong Kong Government	**1.9**	**3.8**	**2.2**	**4.5**
Other governments	**2.1**	**4.2**	**3.6**	**3.8**
Asset-backed securities	**4.0**	**4.7**	**—**	**7.7**
Corporate debt and other securities	**3.2**	**3.2**	**3.3**	**4.0**

The maturity distributions of ABSs are presented in the above table on the basis of contractual maturity dates. The weighted average yield for each range of maturities is calculated by dividing the annualised interest income for the year ended 31 December 2022 by the book amount of debt securities at that date. The yields do not include the effect of related derivatives.

HSBC Holdings

HSBC Holdings carrying amount of financial investments

	2022 $m	2021 $m
Debt instruments measured at amortised cost		
– treasury and other eligible bills	**12,796**	19,508
– debt securities	**6,670**	6,686
At 31 Dec	**19,466**	26,194

Weighted average yields of investment debt securities

	Up to 1 year Yield %	1 to 5 years Yield %	5 to 10 years Yield %	Over 10 years Yield %
Debt securities measured at amortised cost				
US Treasury	**0.3**	**2.8**	**—**	**—**

The weighted average yield for each range of maturities is calculated by dividing the annualised interest income for the year ended 31 December 2022 by the book amount of debt securities at that date. The yields do not include the effect of related derivatives.

17 Assets pledged, collateral received and assets transferred

Assets pledged[1]

Financial assets pledged as collateral

	2022	2021
	$m	$m
Treasury bills and other eligible securities	**18,364**	9,613
Loans and advances to banks	**10,198**	412
Loans and advances to customers	**27,627**	55,370
Debt securities	**60,542**	66,629
Equity securities	**26,902**	34,472
Other	**67,576**	45,396
Assets pledged at 31 Dec	**211,209**	211,892

Assets pledged as collateral include all assets categorised as encumbered in the disclosure on page 89 of the Pillar 3 Disclosures at 31 December 2022*, except for assets held for sale.*

The amount of assets pledged to secure liabilities may be greater than the book value of assets utilised as collateral. For example, in the case of securitisations and covered bonds, the amount of liabilities issued plus mandatory over-collateralisation is less than the book value of the pool of assets available for use as collateral. This is also the case where assets are placed with a custodian or a settlement agent that has a floating charge over all the assets placed to secure any liabilities under settlement accounts.

These transactions are conducted under terms that are usual and customary for collateralised transactions including, where relevant, standard securities lending and borrowing, repurchase agreements and derivative margining. HSBC places both cash and non-cash collateral in relation to derivative transactions.

Hong Kong currency notes in circulation are secured by the deposit of funds in respect of which the Hong Kong Government certificates of indebtedness are held.

Financial assets pledged as collateral which the counterparty has the right to sell or repledge

	2022	2021
	$m	$m
Trading assets	**56,894**	69,719
Financial investments	**27,841**	12,416
At 31 Dec	**84,735**	82,135

Collateral received[1]

The fair value of assets accepted as collateral relating primarily to standard securities lending, reverse repurchase agreements, swaps of securities and derivative margining that HSBC is permitted to sell or repledge in the absence of default was $449,896m (2021: $476,455m). The fair value of any such collateral sold or repledged was $228,245m (2021: $271,582m).

HSBC is obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to standard securities lending, reverse repurchase agreements and derivative margining.

Assets transferred[1]

The assets pledged include transfers to third parties that do not qualify for derecognition, notably secured borrowings such as debt securities held by counterparties as collateral under repurchase agreements and equity securities lent under securities lending agreements, as well as swaps of equity and debt securities. For secured borrowings, the transferred asset collateral continues to be recognised in full while a related liability, reflecting the Group's obligation to repurchase the assets for a fixed price at a future date, is also recognised on the balance sheet.

Where securities are swapped, the transferred asset continues to be recognised in full. There is no associated liability as the non-cash collateral received is not recognised on the balance sheet. The Group is unable to use, sell or pledge the transferred assets for the duration of the transaction, and remains exposed to interest rate risk and credit risk on these pledged assets. With the exception of 'Other sales' in the following table, the counterparty's recourse is not limited to the transferred assets.

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	Carrying amount of:		Fair value of:		
	Transferred assets	**Associated liabilities**	**Transferred assets**	**Associated liabilities**	**Net position**
	$m	**$m**	**$m**	**$m**	**$m**
At 31 Dec 2022					
Repurchase agreements	**52,604**	**48,501**			
Securities lending agreements	**39,134**	**4,613**			
At 31 Dec 2021					
Repurchase agreements	51,135	48,180			
Securities lending agreements	43,644	2,918			
Other sales (recourse to transferred assets only)	3,826	3,826	3,830	3,842	(12)

1 *Excludes assets classified as held for sale.*

18 Interests in associates and joint ventures

Carrying amount of HSBC's interests in associates and joint ventures

	2022	2021
	$m	$m
Interests in associates	29,127	29,515
Interests in joint ventures	127	94
Interests in associates and joint ventures	29,254	29,609

Principal associates of HSBC

	2022		2021	
	Carrying amount	Fair value[1]	Carrying amount	Fair value[1]
	$m	$m	$m	$m
Bank of Communications Co., Limited	23,307	8,141	23,616	8,537
The Saudi British Bank	4,494	6,602	4,426	5,599

1 *Principal associates are listed on recognised stock exchanges. The fair values are based on the quoted market prices of the shares held (Level 1 in the fair value hierarchy).*

	At 31 Dec 2022		
	Country of incorporation and principal place of business	Principal activity	HSBC's interest %
Bank of Communications Co., Limited	People's Republic of China	Banking services	19.03
The Saudi British Bank	Saudi Arabia	Banking services	31.00

Share of profit in associates and joint ventures

	2022	2021
	$m	$m
Bank of Communications Co., Limited	2,377	2,461
The Saudi British Bank	342	276
Other associates and joint ventures	4	309
Share of profit in associates and joint ventures	2,723	3,046

A list of all associates and joint ventures is set out in Note 38.

Bank of Communications Co., Limited

The Group's investment in Bank of Communications Co., Limited ('BoCom') is classified as an associate. Significant influence in BoCom was established with consideration of all relevant factors, including representation on BoCom's Board of Directors and participation in a resource and experience sharing agreement ('RES'). Under the RES, HSBC staff have been seconded to assist in the maintenance of BoCom's financial and operating policies. Investments in associates are recognised using the equity method of accounting in accordance with IAS 28 'Investments in Associates and Joint Ventures', whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the Group's share of BoCom's net assets. An impairment test is required if there is any indication of impairment.

Impairment testing

At 31 December 2022, the fair value of the Group's investment in BoCom had been below the carrying amount for approximately 11 years. As a result, the Group performed an impairment test on the carrying amount, which confirmed that there was no impairment at 31 December 2022 as the recoverable amount as determined by a value-in-use ('VIU') calculation was higher than the carrying value.

	At 31 Dec 2022			At 31 Dec 2021		
	VIU	Carrying value	Fair value	VIU	Carrying value	Fair value
	$bn	$bn	$bn	$bn	$bn	$bn
BoCom	23.5	23.3	8.1	24.8	23.6	8.5

The headroom, which is defined as the extent to which the VIU exceeds the carrying value, decreased by $1.0bn compared with 31 December 2021. The decrease in headroom was principally due to revisions to management's best estimates of BoCom's future earnings in the short to medium term, and the impact from BoCom's actual performance.

In future periods, the VIU may increase or decrease depending on the effect of changes to model inputs. The main model inputs are described below and are based on factors observed at period-end. The factors that could result in a change in the VIU and an impairment include a short-term underperformance by BoCom, a change in regulatory capital requirements or an increase in uncertainty regarding the future performance of BoCom resulting in a downgrade of the forecast of future asset growth or profitability. An increase in the discount rate could also result in a reduction of VIU and an impairment.

If the Group did not have significant influence in BoCom, the investment would be carried at fair value rather than the current carrying value.

Basis of recoverable amount

The impairment test was performed by comparing the recoverable amount of BoCom, determined by a VIU calculation, with its carrying amount. The VIU calculation uses discounted cash flow projections based on management's best estimates of future earnings available to ordinary shareholders prepared in accordance with IAS 36 'Impairment of Assets'. Significant management judgement is required in arriving at the best estimate.

There are two main components to the VIU calculation. The first component is management's best estimate of BoCom's earnings. Forecast earnings growth over the short to medium term are lower than recent (within the last five years) historical actual growth and reflect the uncertainty arising from the current economic outlook. Reflecting management's intent to continue to retain its investment, earnings beyond the

short to medium term are then extrapolated into perpetuity using a long-term growth rate to derive a terminal value, which comprises the majority of the VIU. The second component is the capital maintenance charge ('CMC'), which is management's forecast of the earnings that need to be withheld in order for BoCom to meet capital requirements over the forecast period, meaning that CMC is deducted when arriving at management's estimate of future earnings available to ordinary shareholders. The principal inputs to the CMC calculation include estimates of asset growth, the ratio of risk-weighted assets to total assets and the expected capital requirements. An increase in the CMC as a result of a change to these principal inputs would reduce VIU. Additionally, management considers other qualitative factors, to ensure that the inputs to the VIU calculation remain appropriate.

Key assumptions in value-in-use calculation

We used a number of assumptions in our VIU calculation, in accordance with the requirements of IAS 36:

- Long-term profit growth rate: 3% (2021: 3%) for periods after 2026, which does not exceed forecast GDP growth in mainland China and is similar to forecasts by external analysts.
- Long-term asset growth rate: 3% (2021: 3%) for periods after 2026, which is the rate that assets are expected to grow to achieve long-term profit growth of 3%.
- Discount rate: 10.04% (2021: 10.03%), which is based on a capital asset pricing model ('CAPM'), using market data. The discount rate used is within the range of 8.4% to 10.4% (2021: 8.7% to 10.1%) indicated by the CAPM. While the CAPM range sits at the lower end of the range adopted by selected external analysts of 8.8% to 13.5% (2021: 9.9% to 13.5%), we continue to regard the CAPM range as the most appropriate basis for determining this assumption.
- Expected credit losses ('ECL') as a percentage of customer advances: ranges from 0.99% to 1.05% (2021: 0.98% to 1.12%) in the short to medium term, reflecting reported credit experience through the ongoing Covid-19 pandemic in mainland China followed by an expected reversion to recent historical levels. For periods after 2026, the ratio is 0.97% (2021: 0.97%), which is higher than BoCom's average ECL as a percentage of customer advances in recent years prior to the pandemic.
- Risk-weighted assets as a percentage of total assets: ranges from 61.0% to 64.4% (2021: 61.0% to 62.4%) in the short to medium term, reflecting higher risk-weights in the short term followed by an expected reversion to recent historical levels. For periods after 2026, the ratio is 61.0% (2021: 61.0%), which is similar to BoCom's actual results in recent years.
- Operating income growth rate: ranges from 1.9% to 7.7% (2021: 5.1% to 6.2%) in the short to medium term, which is lower than BoCom's actual results in recent years and is similar to the forecasts disclosed by external analysts. This reflects BoCom's most recent actual results, global trade tensions and industry developments in mainland China.
- Cost-income ratio: ranges from 35.5% to 36.3% (2021: 35.5% to 36.1%) in the short to medium term. These ratios are similar to BoCom's actual results in recent years and forecasts disclosed by external analysts.
- Effective tax rate ('ETR'): ranges from 4.4% to 15.0% (2021: 6.8% to 15.0%) in the short to medium term, reflecting BoCom's actual results and an expected increase towards the long-term assumption through the forecast period. For periods after 2026, the rate is 15.0% (2021: 15.0%), which is higher than the recent historical average, and aligned to the minimum tax rate as proposed by the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting.
- Capital requirements: capital adequacy ratio of 12.5% (2021: 12.5%) and tier 1 capital adequacy ratio of 9.5% (2021: 9.5%), based on BoCom's capital risk appetite and capital requirements respectively.

The following table shows the change to each key assumption in the VIU calculation that on its own would reduce the headroom to nil:

Key assumption	Changes to key assumption to reduce headroom to nil
• Long-term profit growth rate	• Decrease by 4 basis points
• Long-term asset growth rate	• Increase by 3 basis points
• Discount rate	• Increase by 5 basis points
• Expected credit losses as a percentage of customer advances	• Increase by 1 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 26 basis points
• Operating income growth rate	• Decrease by 5 basis points
• Cost-income ratio	• Increase by 15 basis points
• Long-term effective tax rate	• Increase by 46 basis points
• Capital requirements – capital adequacy ratio	• Increase by 5 basis points
• Capital requirements – tier 1 capital adequacy ratio	• Increase by 175 basis points

The following table further illustrates the impact on VIU of reasonably possible changes to key assumptions. This reflects the sensitivity of the VIU to each key assumption on its own and it is possible that more than one favourable and/or unfavourable change may occur at the same time. The selected rates of reasonably possible changes to key assumptions are based on external analysts' forecasts, statutory requirements and other relevant external data sources, which can change period to period.

Sensitivity of VIU to reasonably possible changes in key assumptions

	Favourable change			Unfavourable change		
		Increase in VIU	VIU		Decrease in VIU	VIU
	bps	$bn	$bn	bps	$bn	$bn
At 31 Dec 2022						
Long-term profit growth rate[1]	**75**	**3.6**	**27.1**	**(71)**	**(2.7)**	**20.8**
Long-term asset growth rate[1]	**(71)**	**3.1**	**26.6**	**75**	**(4.1)**	**19.4**
Discount rate	**(164)**	**6.9**	**30.4**	**136**	**(3.7)**	**19.8**
Expected credit losses as a percentage of customer advances	**2022 to 2026: 95 2027 onwards: 91**	**1.9**	**25.4**	**2022 to 2026: 120 2027 onwards: 104**	**(2.9)**	**20.6**
Risk-weighted assets as a percentage of total assets	**(118)**	**0.1**	**23.6**	**239**	**(2.3)**	**21.2**
Operating income growth rate	**44**	**1.3**	**24.8**	**(83)**	**(2.5)**	**21.0**
Cost-income ratio	**(122)**	**1.0**	**24.5**	**174**	**(2.1)**	**21.4**
Long-term effective tax rate	**(426)**	**1.5**	**25.0**	**1,000**	**(3.6)**	**19.9**
Capital requirements – capital adequacy ratio	**—**	**—**	**23.5**	**191**	**(6.3)**	**17.2**
Capital requirements – tier 1 capital adequacy ratio	**—**	**—**	**23.5**	**266**	**(3.2)**	**20.3**
At 31 Dec 2021						
Long-term profit growth rate[1]	87	4.2	29.0	(69)	(2.7)	22.1
Long-term asset growth rate[1]	(69)	2.9	27.7	87	(4.7)	20.1
Discount rate	(133)	5.4	30.2	207	(5.3)	19.5
Expected credit losses as a percentage of customer advances	2021 to 2025: 103 2026 onwards: 91	1.5	26.3	2021 to 2025: 121 2026 onwards: 105	(2.7)	22.1
Risk-weighted assets as a percentage of total assets	(111)	0.2	25.0	280	(2.1)	22.7
Operating income growth rate	37	1.0	25.8	(58)	(1.8)	23.0
Cost-income ratio	(152)	1.7	26.5	174	(1.7)	23.1
Long-term effective tax rate	(104)	0.3	25.1	1,000	(3.6)	21.2
Capital requirements – capital adequacy ratio	—	—	24.8	325	(10.0)	14.8
Capital requirements – tier 1 capital adequacy ratio	—	—	24.8	364	(6.5)	18.3

1 *The reasonably possible ranges of the long-term profit growth rate and long-term asset growth rate assumptions reflect the close relationship between these assumptions, which would result in offsetting changes to each assumption.*

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is $16.9bn to $28.7bn (2021: $19.0bn to $29.3bn). The range is based on impacts set out in the table above arising from the favourable/unfavourable change in the earnings in the short to medium term, the long-term expected credit losses as a percentage of customer advances, and a 50bps increase/decrease in the discount rate. All other long-term assumptions and the basis of the CMC have been kept unchanged when determining the reasonably possible range of the VIU. Impairment, if determined, would be recognised in the income statement. The impact on the Group's CET1 ratio is expected to be minimal in the event of an impairment, as the adverse impact on CET1 capital from the impairment would be offset by the favourable impact from a lower carrying value.

Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2022, HSBC included the associate's results on the basis of the financial statements for the 12 months ended 30 September 2022, taking into account any known changes in the subsequent period from 1 October 2022 to 31 December 2022 that would have materially affected the results.

Selected balance sheet information of BoCom

	At 30 Sep	
	2022	2021
	$m	$m
Cash and balances at central banks	**114,390**	123,194
Due from and placements with banks and other financial institutions	**99,802**	98,932
Loans and advances to customers	**1,022,223**	993,956
Other financial assets	**549,364**	541,577
Other assets	**55,884**	47,679
Total assets	**1,841,663**	1,805,338
Due to and placements from banks and other financial institutions	**277,185**	287,057
Deposits from customers	**1,144,297**	1,099,266
Other financial liabilities	**237,521**	228,135
Other liabilities	**35,543**	40,070
Total liabilities	**1,694,546**	1,654,528
Total equity	**147,117**	150,810

Reconciliation of BoCom's total shareholders' equity to the carrying amount in HSBC's consolidated financial statements

	At 30 Sep	
	2022	2021
	$m	$m
HSBC's share of total shareholders' equity	**22,828**	23,097
Goodwill	**479**	519
Carrying amount	**23,307**	23,616

Selected income statement information of BoCom

	For the 12 months ended 30 Sep	
	2022	2021
	$m	$m
Net interest income	**25,314**	24,582
Net fee and commission income	**6,854**	7,170
Credit and impairment losses	**(9,712)**	(9,701)
Depreciation and amortisation	**(2,351)**	(2,297)
Tax expense	**(598)**	(1,045)
Profit for the year	**13,582**	14,199
Other comprehensive income	**(245)**	(368)
Total comprehensive income	**13,337**	13,831
Dividends received from BoCom	**749**	692

The Saudi British Bank

The Group's investment in The Saudi British Bank ('SABB') is classified as an associate. HSBC is the largest shareholder in SABB with a shareholding of 31%. Significant influence in SABB is established via representation on the Board of Directors. Investments in associates are recognised using the equity method of accounting in accordance with IAS 28, as described previously for BoCom.

Impairment testing

There were no indicators of impairment at 31 December 2022. The fair value of the Group's investment in SABB of $6.6bn was above the carrying amount of $4.5bn.

19 Investments in subsidiaries

Main subsidiaries of HSBC Holdings[1]

	At 31 Dec 2022		
	Place of incorporation or registration	**HSBC's interest %**	**Share class**
Europe			
HSBC Bank plc	**England and Wales**	**100**	**£1 Ordinary, $0.01 Non-Cumulative Third Dollar Preference**
HSBC UK Bank plc	**England and Wales**	**100**	**£1 Ordinary**
HSBC Continental Europe	**France**	**99.99**	**€5 Actions**
HSBC Trinkaus & Burkhardt GmbH	**Germany**	**99.99**	**€1 Ordinary**
Asia			
Hang Seng Bank Limited	**Hong Kong**	**62.14**	**HK$5 Ordinary**
HSBC Bank (China) Company Limited	**People's Republic of China**	**100**	**CNY1 Ordinary**
HSBC Bank Malaysia Berhad	**Malaysia**	**100**	**RM0.5 Ordinary**
HSBC Life (International) Limited	**Bermuda**	**100**	**HK$1 Ordinary**
The Hongkong and Shanghai Banking Corporation Limited	**Hong Kong**	**100**	**Ordinary no par value**
Middle East and North Africa			
HSBC Bank Middle East Limited	**United Arab Emirates**	**100**	**$1 Ordinary and $1 Cumulative Redeemable Preference shares**
North America			
HSBC Bank Canada	**Canada**	**100**	**Common no par value and Preference no par value**
HSBC Bank USA, N.A.	**US**	**100**	**$100 Common and $0.01 Preference**
Latin America			
HSBC Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC	**Mexico**	**99.99**	**MXN2 Ordinary**

1 *Main subsidiaries are either held directly or indirectly via intermediate holding companies.*

Details of the debt, subordinated debt and preference shares issued by the main subsidiaries to parties external to the Group are included in Note 26 'Debt securities in issue' and Note 29 'Subordinated liabilities', respectively.

A list of all related undertakings is set out in Note 38. The principal countries of operation are the same as the countries and territories of incorporation except for HSBC Life (International) Limited, which operates mainly in Hong Kong.

HSBC is structured as a network of regional banks and locally incorporated regulated banking entities. Each bank is separately capitalised in accordance with applicable prudential requirements and maintains a capital buffer consistent with the Group's risk appetite for the relevant country or region. HSBC's capital management process is incorporated in the annual operating plan, which is approved by the Board.

HSBC Holdings is the primary provider of equity capital to its subsidiaries and also provides them with non-equity capital where necessary. These investments are substantially funded by HSBC Holdings' issuance of equity and non-equity capital, and by profit retention.

As part of its capital management process, HSBC Holdings seeks to maintain a balance between the composition of its capital and its investment in subsidiaries. Subject to this, there is no current or foreseen impediment to HSBC Holdings' ability to provide funding for such investments. During 2022, consistent with the Group's capital plan, the Group's subsidiaries did not experience any significant restrictions on paying dividends or repaying loans and advances. Also, there are no foreseen restrictions envisaged with regard to planned dividends or payments. However, the ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective local regulatory capital and banking requirements, exchange controls, statutory reserves, and financial and operating performance.

The amount of guarantees by HSBC Holdings in favour of other Group entities is set out in Note 33.

Information on structured entities consolidated by HSBC where HSBC owns less than 50% of the voting rights is included in Note 20 'Structured entities'. In each of these cases, HSBC controls and consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Impairment testing of investments in subsidiaries

At each reporting period end, HSBC Holdings reviews investments in subsidiaries for indicators of impairment. An impairment is recognised when the carrying amount exceeds the recoverable amount for that investment. The recoverable amount is the higher of the investment's fair value less costs of disposal and its VIU, in accordance with the requirements of IAS 36. The VIU is calculated by discounting management's cash flow projections for the investment. The cash flows represent the free cash flows based on the subsidiary's binding capital requirements.

We used a number of assumptions in our VIU calculation, in accordance with the requirements of IAS 36:

- Management's judgement in estimating future cash flows: The cash flow projections for each investment are based on the latest approved plans, which include forecast capital available for distribution based on the capital requirements of the subsidiary, taking into account minimum and core capital requirements. For the impairment test at 31 December 2022, cash flow projections until the end of 2027 were considered in line with our internal planning horizon. Our cash flow projections include known and observable climate-related opportunities and costs associated with our sustainable products and operating model.
- Long-term growth rates: A long-term growth rate is used to extrapolate the free cash flows in perpetuity. The growth rate reflects inflation for the country or territory within which the investment operates, and is based on the long-term average growth rates.
- Discount rates: The rate used to discount the cash flows is based on the cost of capital assigned to each investment, which is derived using a CAPM. CAPM depends on a number of inputs reflecting financial and economic variables, including the risk-free rate and a premium to reflect the inherent risk of the business being evaluated. These variables are based on the market's assessment of the economic variables and management's judgement. The discount rates for each investment are refined to reflect the rates of inflation for the countries or territories within which the investment operates. In addition, for the purposes of testing investments for impairment, management supplements this process by comparing the discount rates derived using the internally generated CAPM, with cost of capital rates produced by external sources for businesses operating in similar markets. The impacts from climate risk are included to the extent that they are observable in discount rates and asset prices.

The net increase in investments in subsidiaries was partly due to the reversal of impairment of HSBC Overseas Holdings (UK) Limited of $2.5bn. The recoverable amount of HSBC Overseas Holdings (UK) Limited is supported by the recoverable amounts of its subsidiaries, of which the principal subsidiaries are HSBC North America Holdings Limited, HSBC Bank Canada and HSBC Bank Bermuda Limited. As HSBC Overseas Holdings (UK) Limited has entered into a sales purchase agreement with Royal Bank of Canada to dispose of HSBC Bank Canada the sales purchase agreement has been used to support the recoverable amount of $10.8bn (inclusive of the preferred shares) under a fair value less costs of disposal basis. The fair value less costs of disposal of HSBC Bank Canada is at a $3.7bn premium to the book value recorded in HSBC Overseas Holdings (UK) Limited. The cumulative impairment for HSBC Overseas Holdings (UK) Limited at 31 December 2022 was $4.7bn (2021: $7.2bn). The carrying value was $32.8bn at 31 December 2022 (2021: $33.1bn). In 2022, in addition to the planned sale of our banking business in Canada, there has been demonstrable performance of the underlying subsidiaries and an increase in interest rate forecasts. These factors provide us with observable indications that HSBC Overseas Holdings (UK) Limited's value has increased, which has led to the reversal of impairment in HSBC Holdings. However, a distribution of the proceeds from the planned sale of HSBC Bank Canada to HSBC Holdings from HSBC Overseas Holdings (UK) Limited could lead to a future impairment.

Impairment test results

Investments **At 31 Dec 2022**	**Recoverable amount** **$m**	**Discount rate** **%**	**Long-term growth** **%**
HSBC North America Holdings Limited	**18,363**	**10.00**	**2.22**
HSBC Bank Bermuda Limited	**2,471**	**10.40**	**1.87**
At 31 Dec 2021			
HSBC North America Holdings Limited	20,560	9.20	3.50
HSBC Bank Bermuda Limited	1,643	9.50	1.71

Sensitivities of key assumptions in calculating VIU

At 31 December 2022, the recoverable amount of HSBC Overseas Holdings (UK) Limited remained sensitive to reasonably possible changes in key assumptions impacting its principal subsidiaries, notably HSBC North America Holdings Limited and HSBC Bank Bermuda Limited.

In making an estimate of reasonably possible changes to assumptions, management considers the available evidence in respect of each input to the model. These include the external range of observable discount rates, historical performance against forecast, and risks attaching to the key assumptions underlying cash flow.

The following table presents a summary of the key assumptions underlying the most sensitive inputs to the model for HSBC North America Holdings Limited and HSBC Bank Bermuda Limited, the key risks attaching to each, and details of a reasonably possible change to assumptions where, in the opinion of management, these could result in an impairment.

Reasonably possible changes in key assumptions

	Input	Key assumptions	Associated risks	Reasonably possible change
Investment				
HSBC North America Holdings Limited and HSBC Bank Bermuda Limited (subsidiaries of HSBC Overseas Holdings (UK) Limited)	Free cash flows projections	• Level of interest rates and yield curves. • Competitors' positions within the market.	• Strategic actions relating to revenue and costs are not achieved.	• Free cash flow projections decrease by 10%.
	Discount rate	• Discount rate used is a reasonable estimate of a suitable market rate for the profile of the business.	• External evidence arises to suggest that the rate used is not appropriate to the business.	• Discount rate increases by 1%.

Sensitivity of VIU to reasonably possible changes in key assumptions

In $bn (unless otherwise stated)	HSBC North America Holdings Limited	HSBC Bank Bermuda Limited
At 31 December 2022		
VIU	**18.4**	**2.5**
Impact on VIU		
100bps increase in the discount rate – single variable[1]	**(1.7)**	**(0.2)**
10% decrease in forecast profitability – single variable[1]	**(1.8)**	**(0.2)**

1 *The recoverable amount of HSBC Overseas Holding (UK) Limited represents the aggregate of recoverable amounts of the underlying subsidiaries. Single variable sensitivity analysis on a single subsidiary may therefore not be representative of the aggregate impact of the change in the variable.*

Subsidiaries with significant non-controlling interests

	2022	2021
Hang Seng Bank Limited		
Proportion of ownership interests and voting rights held by non-controlling interests	**37.86%**	37.86%
Place of business	**Hong Kong**	Hong Kong
	$m	$m
Profit attributable to non-controlling interests	**520**	708
Accumulated non-controlling interests of the subsidiary	**7,683**	7,597
Dividends paid to non-controlling interests	**361**	568
Summarised financial information:		
– total assets	**240,679**	230,866
– total liabilities	**218,892**	209,315
– net operating income before changes in expected credit losses and other credit impairment charges	**4,325**	4,280
– profit for the year	**1,375**	1,872
– total comprehensive income for the year	**1,269**	1,686

20 Structured entities

HSBC is mainly involved with both consolidated and unconsolidated structured entities through the securitisation of financial assets, conduits and investment funds, established either by HSBC or a third party.

Consolidated structured entities

Total assets of HSBC's consolidated structured entities, split by entity type

	Conduits	Securitisations	HSBC managed funds	Other	Total
	$bn	$bn	$bn	$bn	$bn
At 31 Dec 2022	**4.2**	**7.2**	**4.8**	**7.5**	**23.7**
At 31 Dec 2021	4.4	10.0	6.3	8.4	29.1

Conduits

HSBC has established and manages two types of conduits: securities investment conduits ('SICs') and multi-seller conduits.

Securities investment conduits

The SICs purchase highly rated ABSs to facilitate tailored investment opportunities.

- At 31 December 2022, Solitaire, HSBC's principal SIC, held $1.3bn of ABSs (2021: $1.6bn). It is currently funded entirely by commercial paper ('CP') issued to HSBC. At 31 December 2022, HSBC held $1.5bn of CP (2021: $1.8bn).

Multi-seller conduit

HSBC's multi-seller conduit was established to provide access to flexible market-based sources of finance for its clients. Currently, HSBC bears risk equal to the transaction-specific facility offered to the multi-seller conduit, amounting to $6.2bn at 31 December 2022 (2021: $6.7bn). First loss protection is provided by the originator of the assets, and not by HSBC, through transaction-specific credit enhancements. A layer of secondary loss protection is provided by HSBC in the form of programme-wide enhancement facilities.

Securitisations

HSBC uses structured entities to securitise customer loans and advances it originates in order to diversify its sources of funding for asset origination and capital efficiency purposes. The loans and advances are transferred by HSBC to the structured entities for cash or synthetically through credit default swaps, and the structured entities issue debt securities to investors.

HSBC managed funds

HSBC has established a number of money market and non-money market funds. Where it is deemed to be acting as principal rather than agent in its role as investment manager, HSBC controls these funds.

Other

HSBC has entered into a number of transactions in the normal course of business, which include asset and structured finance transactions where it has control of the structured entity. In addition, HSBC is deemed to control a number of third-party managed funds through its involvement as a principal in the funds.

Unconsolidated structured entities

The term 'unconsolidated structured entities' refers to all structured entities not controlled by HSBC. The Group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities.

Nature and risks associated with HSBC interests in unconsolidated structured entities

Total asset values of the entities ($m)	**Securitisations**	**HSBC managed funds**	**Non-HSBC managed funds**	**Other**	**Total**
0–500	**85**	**338**	**1,321**	**41**	**1,785**
500–2,000	**8**	**102**	**929**	**4**	**1,043**
2,000–5,000	**—**	**28**	**388**	**—**	**416**
5,000–25,000	**—**	**18**	**206**	**—**	**224**
25,000+	**—**	**5**	**24**	**—**	**29**
Number of entities at 31 Dec 2022	**93**	**491**	**2,868**	**45**	**3,497**
	$bn	**$bn**	**$bn**	**$bn**	**$bn**
Total assets in relation to HSBC's interests in the unconsolidated structured entities	**2.5**	**10.7**	**19.7**	**2.6**	**35.5**
– trading assets	**—**	**0.4**	**0.1**	**—**	**0.5**
– financial assets designated and otherwise mandatorily measured at fair value	**—**	**9.7**	**18.7**	**—**	**28.4**
– loans and advances to customers	**2.5**	**—**	**0.5**	**1.9**	**4.9**
– financial investments	**—**	**0.6**	**0.4**	**—**	**1.0**
– other assets	**—**	**—**	**—**	**0.7**	**0.7**
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	**—**	**—**	**—**	**0.4**	**0.4**
– other liabilities	**—**	**—**	**—**	**0.4**	**0.4**
Other off-balance sheet commitments	**0.2**	**1.5**	**4.6**	**1.8**	**8.1**
HSBC's maximum exposure at 31 Dec 2022	**2.7**	**12.2**	**24.3**	**4.0**	**43.2**
Total asset values of the entities ($m)					
0–500	96	294	1,408	37	1,835
500–2,000	11	116	911	3	1,041
2,000–5,000	—	33	435	—	468
5,000–25,000	—	14	197	—	211
25,000+	—	4	11	—	15
Number of entities at 31 Dec 2021	107	461	2,962	40	3,570
	$bn	$bn	$bn	$bn	$bn
Total assets in relation to HSBC's interests in the unconsolidated structured entities	4.8	10.8	18.6	3.8	38.0
– trading assets	—	0.2	2.4	0.1	2.7
– financial assets designated and otherwise mandatorily measured at fair value	—	10.0	15.5	—	25.5
– loans and advances to customers	4.8	—	0.1	3.0	7.9
– financial investments	—	0.6	0.6	—	1.2
– other assets	—	—	—	0.7	0.7
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	—	—	—	0.4	0.4
– other liabilities	—	—	—	0.4	0.4
Other off-balance sheet commitments	0.1	0.9	4.6	1.2	6.8
HSBC's maximum exposure at 31 Dec 2021	4.9	11.7	23.2	4.6	44.4

The maximum exposure to loss from HSBC's interests in unconsolidated structured entities represents the maximum loss it could incur as a result of its involvement with these entities regardless of the probability of the loss being incurred.

- For commitments, guarantees and written credit default swaps, the maximum exposure to loss is the notional amount of potential future losses.
- For retained and purchased investments and loans to unconsolidated structured entities, the maximum exposure to loss is the carrying value of these interests at the balance sheet reporting date.

The maximum exposure to loss is stated gross of the effects of hedging and collateral arrangements that HSBC has entered into in order to mitigate the Group's exposure to loss.

Securitisations

HSBC has interests in unconsolidated securitisation vehicles through holding notes issued by these entities. In addition, HSBC has investments in ABSs issued by third-party structured entities.

HSBC managed funds

HSBC establishes and manages money market funds and non-money market investment funds to provide customers with investment opportunities. Further information on funds under management is provided on page 115.

HSBC, as fund manager, may be entitled to receive management and performance fees based on the assets under management. HSBC may also retain units in these funds.

Non-HSBC managed funds

HSBC purchases and holds units of third-party managed funds in order to facilitate business and meet customer needs.

Other

HSBC has established structured entities in the normal course of business, such as structured credit transactions for customers, to provide finance to public and private sector infrastructure projects, and for asset and structured finance transactions.

In addition to the interests disclosed above, HSBC enters into derivative contracts, reverse repos and stock borrowing transactions with structured entities. These interests arise in the normal course of business for the facilitation of third-party transactions and risk management solutions.

HSBC sponsored structured entities

The amount of assets transferred to and income received from such sponsored structured entities during 2022 and 2021 was not significant.

21 Goodwill and intangible assets

	2022	2021
	$m	$m
Goodwill	**4,156**	5,033
Present value of in-force long-term insurance business	**9,900**	9,453
Other intangible assets[1]	**7,265**	6,136
At 31 Dec	**21,321**	20,622

1 *Included within other intangible assets is internally generated software with a net carrying value of $6,166m (2021: $5,430m). During the year, capitalisation of internally generated software was $2,663m (2021: $2,373m), impairment was $125m (2021: $137m) and amortisation was $1,447m (2021: $1,183m).*

Movement analysis of goodwill

	2022	2021
	$m	$m
Gross amount		
At 1 Jan	**22,215**	23,135
Exchange differences	**(776)**	(905)
Reclassified to held for sale and additions[1]	**(2,485)**	—
Other	**11**	(15)
At 31 Dec	**18,965**	22,215
Accumulated impairment losses		
At 1 Jan	**(17,182)**	(17,254)
Impairment losses[2]	**—**	(587)
Exchange differences	**482**	659
Reclassified to held for sale[1]	**1,891**	—
At 31 Dec	**(14,809)**	(17,182)
Net carrying amount at 31 Dec	**4,156**	5,033

1 *Includes goodwill allocated to disposal groups as a result of the planned sales of our retail banking operations in France, banking business in Canada and branch operations in Greece, offset by goodwill arising from the acquisition of L&T Investment Management Limited. For further details, see Note 23.*
2 *Full impairment of goodwill allocated to Latin America – WPB.*

Goodwill

Impairment testing

The Group's impairment test in respect of goodwill allocated to each cash-generating unit ('CGU') is performed at 1 October each year. A review for indicators of impairment is undertaken at each subsequent quarter-end and at 31 December 2022. No indicators of impairment were identified as part of these reviews.

Basis of the recoverable amount

The recoverable amount of all CGUs to which goodwill has been allocated was equal to its value in use ('VIU') at each respective testing date. The VIU is calculated by discounting management's cash flow projections for the CGU. The key assumptions used in the VIU calculation for each individually significant CGU that is not impaired are discussed below.

Key assumptions in VIU calculation – significant CGUs at 1 October 2022

	Carrying amount at 1 Oct 2022	***of which goodwill***	**Value in use at 1 Oct 2022**	**Discount rate**	**Growth rate beyond initial cash flow**	Carrying amount at 1 Oct 2021	*of which goodwill*	Value in use at 1 Oct 2021	Discount rate	Growth rate beyond initial cash flow projections
	$m	***$m***	**$m**	**%**	**%**	$m	*$m*	$m	%	%
Europe – WPB	**15,215**	***2,643***	**46,596**	**9.9**	**2.0**	18,780	*3,556*	29,799	9.2	1.8

At 1 October 2022, aggregate goodwill of $1,464m (1 October 2021: $2,108m) had been allocated to CGUs that were not considered individually significant. The Group's CGUs do not carry on their balance sheets any significant intangible assets with indefinite useful lives, other than goodwill.

Management's judgement in estimating the cash flows of a CGU

The cash flow projections for each CGU are based on forecast profitability plans approved by the Board and minimum capital levels required to support the business operations of a CGU. The Board challenges and endorses planning assumptions in light of internal capital allocation decisions necessary to support our strategy, current market conditions and macroeconomic outlook. For the 1 October 2022 impairment test, cash flow projections until the end of 2027 were considered, in line with our internal planning horizon. Key assumptions underlying cash flow projections reflect management's outlook on interest rates and inflation, as well as business strategy, including the scale of investment in technology and automation. Our cash flow projections include known and observable climate-related opportunities and costs associated with our sustainable products and operating model. As required by IFRSs, estimates of future cash flows exclude estimated cash inflows or outflows that are expected to arise from restructuring initiatives before an entity has a constructive obligation to carry out the plan, and would therefore have recognised a provision for restructuring costs.

Discount rate

The rate used to discount the cash flows is based on the cost of equity assigned to each CGU, which is derived using a capital asset pricing model ('CAPM') and market implied cost of equity. CAPM depends on a number of inputs reflecting financial and economic variables, including the risk-free rate and a premium to reflect the inherent risk of the business being evaluated. These variables are based on the market's assessment of the economic variables and management's judgement. The discount rates for each CGU are refined to reflect the rates of inflation for the countries within which the CGU operates. In addition, for the purposes of testing goodwill for impairment, management supplements this process by comparing the discount rates derived using the internally generated CAPM, with the cost of equity rates produced by external sources for businesses operating in similar markets. The impacts of climate-risk are included to the extent that they are observable in discount rates and asset prices.

Long-term growth rate

The long-term growth rate is used to extrapolate the cash flows in perpetuity because of the long-term perspective within the Group of business units making up the CGUs. These growth rates reflect inflation for the countries within which the CGU operates or from which it derives revenue.

Sensitivities of key assumptions in calculating VIU

At 1 October 2022, given the extent by which VIU exceeds carrying amount, the Europe – WPB CGU was not sensitive to reasonably possible adverse changes in key assumptions supporting the recoverable amount. In making an estimate of reasonably possible changes to assumptions, management considers the available evidence in respect of each input to the VIU calculation, such as the external range of discount rates observable, historical performance against forecast and risks attaching to the key assumptions underlying cash flow projections. None of the remaining CGUs are individually significant.

Other intangible assets

Impairment testing

Impairment of other intangible assets is assessed in accordance with our policy explained in Note 1.2(n) by comparing the net carrying amount of CGUs containing intangible assets with their recoverable amounts. Recoverable amounts are determined by calculating an estimated VIU or fair value, as appropriate, for each CGU. No significant impairment was recognised during the year.

Key assumptions in VIU calculation

We used a number of assumptions in our VIU calculation, in accordance with the requirements of IAS 36:

- Management's judgement in estimating future cash flows: We considered past business performance, current market conditions and our macroeconomic outlook to estimate future earnings. As required by IFRSs, estimates of future cash flows exclude estimated cash inflows or outflows that are expected to arise from restructuring initiatives before an entity has a constructive obligation to carry out the plan, and would therefore have recognised a provision for restructuring costs. For some businesses, this means that the benefit of certain strategic actions may not be included in the impairment assessment, including capital releases. Our cash flow projections include known and observable climate-related opportunities and costs associated with our sustainable products and operating model.

- Long-term growth rates: The long-term growth rate is used to extrapolate the cash flows in perpetuity because of the long-term perspective of the businesses within the Group.
- Discount rates: Rates are based on a combination of CAPM and market-implied calculations considering market data for the businesses and geographies in which the Group operates. The impacts of climate-risk are included to the extent that they are observable in discount rates and asset prices.

Future software capitalisation

We will continue to invest in digital capabilities to meet our strategic objectives. However, software capitalisation within businesses where impairment was identified will not resume until the performance outlook for each business indicates future profits are sufficient to support capitalisation. The cost of additional software investment in these businesses will be recognised as an operating expense until such time.

Sensitivity of estimates relating to non-financial assets

As explained in Note 1.2(a), estimates of future cash flows for CGUs are made in the review of goodwill and non-financial assets for impairment. Non-financial assets include other intangible assets shown above, and owned property, plant and equipment and right-of-use assets (see Note 22). The most significant sources of estimation uncertainty are in respect of the goodwill balances disclosed above. There are no non-financial asset balances relating to individual CGUs which involve estimation uncertainty that represents a significant risk of resulting in a material adjustment to the results and financial position of the Group within the next financial year.

Non-financial assets are widely distributed across CGUs within the legal entities of the Group, including Corporate Centre assets that cannot be allocated to CGUs and are therefore tested for impairment at consolidated level. The recoverable amounts of other intangible assets, owned property, plant and equipment, and right-of-use assets cannot be lower than individual asset fair values less costs to dispose, where relevant. At 31 December 2022, none of the CGUs were sensitive to reasonably possible adverse changes in key assumptions supporting the recoverable amount. In making an estimate of reasonably possible changes to assumptions, management considers the available evidence in respect of each input to the VIU calculation, such as the external range of discount rates observable, historical performance against forecast and risks attaching to the key assumptions underlying cash flow projections.

Present value of in-force long-term insurance business

When calculating the present value of in-force long-term ('PVIF') insurance business, expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions, and management's judgement of future trends and uncertainty in the underlying assumptions is reflected by applying margins (as opposed to a cost of capital methodology) including valuing the cost of policyholder options and guarantees using stochastic techniques.

Financial Reporting Committees of each key insurance entity meet on a quarterly basis to review and approve PVIF assumptions. All changes to non-economic assumptions, economic assumptions that are not observable and model methodologies must be approved by the Financial Reporting Committee.

Movements in PVIF

	2022	2021
	$m	$m
At 1 Jan	**9,453**	9,435
Acquisitions	**271**	—
Change in PVIF of long-term insurance business	**263**	130
– value of new business written during the year	**1,322**	1,090
– expected return[1]	**(785)**	(903)
– assumption changes and experience variances (see below)	**(252)**	(105)
– other adjustments	**(22)**	48
Exchange differences and other movements	**(87)**	(112)
At 31 Dec	**9,900**	9,453

1 *'Expected return' represents the unwinding of the discount rate and reversal of expected cash flows for the period.*

Assumption changes and experience variances

Included within this line item are:

- $875m decrease (2021: $59m increase) in PVIF due to rising interest rates, which is directly offset within the valuation of liabilities under insurance contracts;
- $72m decrease (2021: $324m decrease) reflecting the future expected sharing of returns with policyholders on contracts with discretionary participation features ('DPF'), to the extent this sharing is not already included in liabilities under insurance contracts; and
- $695m increase (2021: $160m increase) driven by other assumptions changes and experience variances.

Key assumptions used in the computation of PVIF for main life insurance operations

Economic assumptions are set in a way that is consistent with observable market values. The valuation of PVIF is sensitive to observed market movements and the impact of such changes is included in the sensitivities presented below.

	2022		2021	
	Hong Kong	**France[1]**	Hong Kong	France[1]
	%	**%**	%	%
Weighted average risk-free rate	**3.85**	**2.80**	1.40	0.69
Weighted average risk discount rate	**7.33**	**4.44**	5.20	1.55
Expense inflation	**3.00**	**4.26**	3.00	1.80

1 *For 2022, the calculation of France's PVIF assumes a risk discount rate of 4.44% (2021: 1.55%) plus a risk margin of $100m (2021: $215m).*

Sensitivity to changes in economic assumptions

The Group sets the risk discount rate applied to the PVIF calculation by starting from a risk-free rate curve and adding explicit allowances for risks not reflected in the best-estimate cash flow modelling. Where the insurance operations provide options and guarantees to policyholders, the cost of these options and guarantees is accounted for as a deduction from the PVIF asset, unless the cost of such guarantees is already allowed for as an explicit addition to liabilities under insurance contracts. For further details of these guarantees and the impact of changes in economic assumptions on our insurance manufacturing subsidiaries, see page 237.

Sensitivity to changes in non-economic assumptions

Policyholder liabilities and PVIF are determined by reference to non-economic assumptions, including mortality and/or morbidity, lapse rates and expense rates. For further details on the impact of changes in non-economic assumptions on our insurance manufacturing operations, see page 238.

22 Prepayments, accrued income and other assets

	2022	2021
	$m	$m
Prepayments and accrued income	**10,316**	8,233
Settlement accounts	**19,565**	17,713
Cash collateral and margin receivables	**63,421**	42,171
Bullion	**15,752**	15,283
Endorsements and acceptances	**8,407**	11,229
Reinsurers' share of liabilities under insurance contracts (Note 4)	**4,257**	3,668
Employee benefit assets (Note 5)	**7,282**	10,269
Right-of-use assets	**2,219**	2,985
Owned property, plant and equipment	**10,365**	10,255
Other accounts	**15,282**	14,765
At 31 Dec	**156,866**	136,571

Prepayments, accrued income and other assets include $113,383m (2021: $91,045m) of financial assets, the majority of which are measured at amortised cost.

23 Assets held for sale and liabilities of disposal groups held for sale

	2022	2021
	$m	$m
Held for sale at 31 December		
Disposal groups	**118,055**	2,921
Unallocated impairment losses[1]	**(2,385)**	—
Non-current assets held for sale	**249**	490
Assets held for sale	**115,919**	3,411
Liabilities of disposal groups held for sale	**114,597**	9,005

1 This represents impairment losses in excess of the carrying value of the non-current assets, excluded from the measurement scope of IFRS 5.

Disposal groups

Planned sale of our retail banking operations in France

On 25 November 2021, HSBC Continental Europe signed a framework agreement with Promontoria MMB SAS ('My Money Group') and its subsidiary Banque des Caraïbes SA, regarding the planned sale of HSBC Continental Europe's retail banking operations in France. The sale, which is subject to regulatory approvals and the satisfaction of other relevant conditions, includes: HSBC Continental Europe's French retail banking operations; the Crédit Commercial de France ('CCF') brand; and HSBC Continental Europe's 100% ownership interest in HSBC SFH (France) and its 3% ownership interest in Crédit Logement.

The framework agreement has a long-stop date of 31 May 2024, if the sale has not closed by that point, the agreement will terminate, although that date can be extended by either party to 30 November 2024 in certain circumstances or with the agreement of both parties. We have agreed a detailed plan with My Money Group with the aim of completing the sale in the second half of 2023, subject to regulatory approvals, agreement and implementation of necessary financing structures, and the completion of the operational transfer, including customer and data migrations. In this regard the framework agreement imposes certain obligations on the parties in planning for completion.

Given the scale and complexity of the business being sold, there is risk of delay in the implementation of this plan. The disposal group was classified as held for sale for the purposes of IFRS 5 as at 30 September 2022, reflecting the prevailing judgements concerning likelihood of the framework agreement's timetable being achieved. The assets and liabilities classified as held for sale were determined in accordance with the framework agreement, and are subject to change as the detailed transition plan is executed. This classification and consequential remeasurement resulted in an impairment loss of $2.4bn, which included impairment of goodwill of $0.4bn and related transaction costs. At 31 December 2022, we reassessed the likelihood of completion, taking account of the most recent correspondence with My Money Group concerning the implementation of the plan and related developments. As a result of this reassessment, the likelihood of completion in 2023 is judged to be highly probable. As such, and in accordance with IFRS 5, the disposal group continues to be classified as held for sale.

The disposal group will be remeasured at the lower of the carrying amount and fair value less costs to sell at each reporting period. Any remaining gains or losses not previously recognised, including from the recycling of foreign currency translation reserves and the reversal of any remaining deferred tax assets and liabilities, will be recognised on completion.

Planned sale of our banking business in Canada

On 29 November 2022, HSBC Holdings plc announced its wholly-owned subsidiary, HSBC Overseas Holdings (UK) Limited, entered into an agreement for the planned sale of its banking business in Canada to Royal Bank of Canada. Completion of the transaction is expected in late 2023, subject to regulatory and governmental approval.

The majority of the estimated gain on sale of $5.7bn (inclusive of the recycling of an estimated $0.6bn of accumulated foreign currency translation reserve losses) will be recognised on completion, reduced by earnings recognised by the Group in the period to completion. The estimated pre-tax profit on the sale will be recognised through a combination of the consolidation of HSBC Canada's results into the Group's financial statements (between the 30 June 2022 net asset reference date and until completion), and the remaining gain on sale recognised at completion. There would be no tax on the gain recognised at completion. At 31 December 2022, total assets of $90bn and total liabilities of $85bn met the criteria to be classified as held for sale in accordance with IFRS 5.

Planned sale of our branch operations in Greece

On 24 May 2022, HSBC Continental Europe signed a sale and purchase agreement for the planned sale of its branch operations in Greece to Pancreta Bank SA. Completion of the transaction is subject to regulatory approval, and is currently expected to occur in the first half of 2023. At 31 December 2022, the disposal group included $0.4bn of loans and advances to customers and $2.3bn of customer accounts, which met the criteria to be classified as held for sale. In the second quarter of 2022, we recognised a loss of $0.1bn, including goodwill impairment, upon reclassification as held for sale in accordance with IFRS 5. On completion accumulated foreign currency translation reserves will be recycled to the income statement.

Planned sale of our business in Russia

On 30 June 2022, following a strategic review of our business in Russia, HSBC Europe BV (a wholly-owned subsidiary of HSBC Bank plc) entered into an agreement for the planned sale of its wholly-owned subsidiary HSBC Bank (RR) (Limited Liability Company). Completion of the transaction is subject to regulatory and governmental approval, and is currently expected to occur in the first half of 2023. In 2022, a $0.3bn loss on the planned sale was recognised, upon reclassification as held for sale in accordance with IFRS 5. On completion accumulated foreign currency translation reserves will be recycled to the income statement.

At 31 December 2022, the major classes of assets and associated liabilities of disposal groups held for sale, including allocated impairment losses, were as follows:

	Canada	Retail banking operations in France	Other	Total
	$m	$m	$m	$m
Assets of disposal groups held for sale				
Cash and balances at central banks	4,664	71	1,811	6,546
Trading assets	3,168	—	8	3,176
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	13	47	1	61
Derivatives	866	—	—	866
Loans and advances to banks	99	—	154	253
Loans and advances to customers	55,197	25,029	350	80,576
Reverse repurchase agreements – non-trading	4,396	—	250	4,646
Financial investments[1]	17,243	—	106	17,349
Goodwill	225	—	—	225
Prepayments, accrued income and other assets	4,256	75	26	4,357
Total assets at 31 December 2022	**90,127**	**25,222**	**2,706**	**118,055**
Liabilities of disposal groups held for sale				
Trading liabilities	2,751	—	3	2,754
Deposits by banks	62	—	2	64
Customer accounts	60,606	22,348	2,320	85,274
Repurchase agreements – non-trading	3,266	—	—	3,266
Financial liabilities designated at fair value	—	3,523	—	3,523
Derivatives	806	7	—	813
Debt securities in issue	11,602	1,326	—	12,928
Subordinated liabilities	8	—	—	8
Accruals, deferred income and other liabilities	5,727	159	81	5,967
Total liabilities at 31 December 2022	**84,828**	**27,363**	**2,406**	**114,597**
Expected date of completion	**Second half of 2023**	**Second half of 2023**		
Operating segment	**All global businesses**	**WPB**		

1 *Includes financial investments measured at fair value through other comprehensive income of $11,184m and debt instruments measured at amortised cost of $6,165m*

	Retail banking operations in France
	$m
Net assets/(liabilities) classified as held for sale[1]	(2,063)
Expected cash contribution[2]	4,094
Disposal group post-cash contribution[3]	**2,031**

1 *Excludes impairment loss allocated against the non-current assets that are in scope of IFRS 5 measurement of $78m.*
2 *The contributions are reported within 'Cash and balances at central banks' on the Group's consolidated balance sheet.*
3 *'Disposal group post-cash contribution' includes the net asset value of the transferring business of €1.6bn ($1.8bn) and $0.2bn of additional items to which a nil value is ascribed per the framework agreement.*

Under the financial terms of the planned transaction, HSBC Continental Europe will transfer the business with a net asset value of €1.6bn ($1.8bn), subject to adjustment (upwards or downwards) in certain circumstances, for a consideration of €1. Any required increase to the net asset value of the business to achieve the net asset value of €1.6bn ($1.8bn) will be satisfied by the inclusion of additional cash. The value of cash contribution will be determined by the net asset or liability position of the disposal group at the point of completion. Based upon the net liabilities of the disposal group at 31 December 2022, HSBC would be expected to include a cash contribution of $4.1bn as part of the planned transaction.

Completed business disposals

Mass market retail banking business in the US

On 26 May 2021, we announced our intention to exit our mass market retail banking business in the US, including our Personal and Advance propositions, as well as retail business banking, and rebranding approximately 20 to 25 of our retail branches into international wealth centres to serve our Premier and Jade customers. In conjunction with the execution of this strategy, HSBC Bank USA, N.A. entered into definitive sale agreements with Citizens Bank and Cathay Bank to sell 90 of our retail branches along with substantially all residential mortgage, unsecured and retail business banking loans and all deposits in our branch network not associated with our Premier, Jade and Private Banking customers. As a result of entering into these sale agreements, assets and liabilities related to the agreements were transferred to held for sale during the second quarter of 2021.

In February 2022, we completed the sale of the branch disposal group and recognised a net gain on sale of $0.2bn (including subsequent closing adjustments). Included in the sale were $2.1bn of loans and advances to customers and $6.9bn of customer accounts. Certain assets under management associated with our mass market retail banking operations were also transferred. The remaining branches not sold or rebranded have been closed.

Business acquisitions

The following acquisitions form part of our strategy to become a market leader in Asian wealth management:

- On 28 January 2022, HSBC Insurance (Asia-Pacific) Holdings Limited, a subsidiary of the Group, notified the shareholders of Canara HSBC Life Insurance Company Limited ('Canara HSBC') of its intention to increase its shareholding in Canara HSBC up to 49%. HSBC currently has a 26% shareholding, which is accounted for as an associate. Any increase in shareholding is subject to agreement with other shareholders in Canara HSBC, as well as internal and regulatory approvals. Established in 2008, Canara HSBC is a life insurance company based in India.
- On 11 February 2022, HSBC Insurance (Asia-Pacific) Holdings Limited completed the acquisition of 100% of AXA Insurance Pte Limited ('AXA Singapore') for $0.5bn. A gain on acquisition of $0.1bn was recorded, reflecting the excess of the fair value of net assets acquired (gross assets of $4.5bn and gross liabilities of $3.9bn) over the acquisition price. The legal integration of AXA Singapore with HSBC's pre-existing insurance operations in the country concluded on 1 February 2023.
- On 6 April 2022, The Hongkong and Shanghai Banking Corporation Limited, a subsidiary of the Group, announced it had increased its shareholding in HSBC Qianhai Securities Limited, a partially-owned subsidiary, for $0.2bn from 51% to 90%.
- On 23 June 2022, HSBC Insurance (Asia) Limited, a subsidiary of the Group, acquired the remaining 50% equity interest in HSBC Life Insurance Company Limited for $0.2bn. Headquartered in Shanghai, HSBC Life Insurance Company Limited offers a comprehensive range of insurance solutions covering annuity, whole life, critical illness and unit-linked insurance products.
- On 25 November 2022, HSBC Asset Management (India) Private Ltd, a subsidiary of the Group, completed the acquisition of L&T Investment Management Limited from L&T Finance Holdings Limited for $0.4bn, recognised primarily as intangibles and goodwill. L&T Investment Management Limited is the investment manager of the L&T Mutual Fund, with assets under management of $9.4bn on completion.

24 Trading liabilities

	2022	2021
	$m	$m
Deposits by banks[1]	**9,332**	4,243
Customer accounts[1]	**10,724**	9,424
Other debt securities in issue (Note 26)	**978**	1,792
Other liabilities – net short positions in securities	**51,319**	69,445
At 31 Dec	**72,353**	84,904

1 *'Deposits by banks' and 'Customer accounts' include fair value repos, stock lending and other amounts.*

25 Financial liabilities designated at fair value

HSBC

	2022	2021
	$m	$m
Deposits by banks and customer accounts[1]	**19,171**	16,703
Liabilities to customers under investment contracts	**5,380**	5,938
Debt securities in issue (Note 26)	**93,140**	112,761
Subordinated liabilities (Note 29)	**9,636**	10,100
At 31 Dec	**127,327**	145,502

1 *Structured deposits placed at HSBC Bank USA are insured by the Federal Deposit Insurance Corporation, a US government agency, up to $250,000 per depositor.*

The carrying amount of financial liabilities designated at fair value was $8,124m less than the contractual amount at maturity (2021: $827m more). The cumulative amount of change in fair value attributable to changes in credit risk was a profit of $234m (2021: loss of $2,084m).

HSBC Holdings

	2022	2021
	$m	$m
Debt securities in issue (Note 26)	**25,423**	26,818
Subordinated liabilities (Note 29)	**6,700**	5,600
At 31 Dec	**32,123**	32,418

The carrying amount of financial liabilities designated at fair value was $2,405m less than the contractual amount at maturity (2021: $1,766m more). The cumulative amount of change in fair value attributable to changes in credit risk was a loss of $516m (2021: $951m).

26 Debt securities in issue

HSBC

	2022	2021
	$m	$m
Bonds and medium-term notes	**145,240**	166,537
Other debt securities in issue	**27,027**	26,573
Total debt securities in issue	**172,267**	193,110
Included within:		
– trading liabilities (Note 24)	**(978)**	(1,792)
– financial liabilities designated at fair value (Note 25)	**(93,140)**	(112,761)
At 31 Dec	**78,149**	78,557

HSBC Holdings

	2022	2021
	$m	$m
Debt securities	**92,361**	94,301
Included within:		
– financial liabilities designated at fair value (Note 25)	**(25,423)**	(26,818)
At 31 Dec	**66,938**	67,483

27 Accruals, deferred income and other liabilities

	2022	2021
	$m	$m
Accruals and deferred income	**12,353**	10,466
Settlement accounts	**18,176**	15,226
Cash collateral and margin payables	**70,292**	50,226
Endorsements and acceptances	**8,379**	11,232
Employee benefit liabilities (Note 5)	**1,096**	1,607
Lease liabilities	**2,767**	3,586
Other liabilities	**20,177**	22,430
At 31 Dec	**133,240**	114,773

Accruals, deferred income and other liabilities include $125,890m (2021: $111,887m) of financial liabilities, the majority of which are measured at amortised cost.

28 Provisions

	Restructuring costs	Legal proceedings and regulatory matters	Customer remediation	Other provisions	Total
	$m	$m	$m	$m	$m
Provisions (excluding contractual commitments)					
At 1 Jan 2022	383	619	386	558	1,946
Additions	**434**	**271**	**60**	**206**	**971**
Amounts utilised	**(288)**	**(393)**	**(106)**	**(168)**	**(955)**
Unused amounts reversed	**(87)**	**(82)**	**(109)**	**(125)**	**(403)**
Exchange and other movements	**3**	**(6)**	**(36)**	**(74)**	**(113)**
At 31 Dec 2022	**445**	**409**	**195**	**397**	**1,446**
Contractual commitments[1]					
At 1 Jan 2022					620
Net change in expected credit loss provision and other movements					**(108)**
At 31 Dec 2022					**512**
Total provisions					
At 31 Dec 2021					2,566
At 31 Dec 2022					**1,958**

	Restructuring costs	Legal proceedings and regulatory matters	Customer remediation	Other provisions	Total
	$m	$m	$m	$m	$m
Provisions (excluding contractual commitments)					
At 1 Jan 2021	671	756	858	305	2,590
Additions	347	249	192	471	1,259
Amounts utilised	(499)	(316)	(548)	(58)	(1,421)
Unused amounts reversed	(170)	(59)	(113)	(124)	(466)
Exchange and other movements	34	(11)	(3)	(36)	(16)
At 31 Dec 2021	383	619	386	558	1,946
Contractual commitments[1]					
At 1 Jan 2021					1,088
Net change in expected credit loss provision and other movements					(468)
At 31 Dec 2021					620
Total provisions					
At 31 Dec 2020					3,678
At 31 Dec 2021					2,566

1 *Contractual commitments include the provision for contingent liabilities measured under IFRS 9 'Financial Instruments' in respect of financial guarantees and the expected credit loss provision on off-balance sheet guarantees and commitments.*

Further details of 'Legal proceedings and regulatory matters' are set out in Note 35. Legal proceedings include civil court, arbitration or tribunal proceedings brought against HSBC companies (whether by way of claim or counterclaim) or civil disputes that may, if not settled, result in court, arbitration or tribunal proceedings. Regulatory matters refer to investigations, reviews and other actions carried out by, or in response to the actions of, regulators or law enforcement agencies in connection with alleged wrongdoing by HSBC.

Customer remediation refers to HSBC's activities to compensate customers for losses or damages associated with a failure to comply with regulations or to treat customers fairly. Customer remediation is often initiated by HSBC in response to customer complaints and/or industry developments in sales practices and is not necessarily initiated by regulatory action.

For further details of the impact of IFRS 9 on undrawn loan commitments and financial guarantees, presented in 'Contractual commitments', see Note 33. This provision results from the adoption of IFRS 9 and has no comparatives. Further analysis of the movement in the expected credit loss provision is disclosed within the 'Reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees' table on page 163.

29 Subordinated liabilities

HSBC's subordinated liabilities

	2022	2021
	$m	$m
At amortised cost	**22,290**	20,487
– subordinated liabilities	**20,547**	18,640
– preferred securities	**1,743**	1,847
Designated at fair value (Note 25)	**9,636**	10,100
– subordinated liabilities	**9,636**	10,100
– preferred securities	**—**	—
At 31 Dec	**31,926**	30,587
Issued by HSBC subsidiaries	**6,094**	9,112
Issued by HSBC Holdings	**25,832**	21,475

Subordinated liabilities rank behind senior obligations and generally count towards the capital base of HSBC. Capital securities may be called and redeemed by HSBC subject to prior notification to the PRA and, where relevant, the consent of the local banking regulator. If not redeemed at the first call date, coupons payable may reset or become floating rate based on relevant market rates. On subordinated liabilities other than floating rate notes, interest is payable at fixed rates of up to 10.176%.

The balance sheet amounts disclosed in the following table are presented on an IFRS basis and do not reflect the amount that the instruments contribute to regulatory capital, principally due to regulatory amortisation and regulatory eligibility limits.

HSBC's subsidiaries subordinated liabilities in issue

		First call date	Maturity date	2022 $m	2021 $m
Additional tier 1 capital securities guaranteed by HSBC Holdings[1,2]					
$900m	10.176% non-cumulative step-up perpetual preferred securities, series 2[3]	Jun 2030		**900**	900
				900	900
Additional tier 1 capital securities guaranteed by HSBC Bank plc[1,2]					
£700m	5.844% non-cumulative step-up perpetual preferred securities[4,5]	Nov 2031		**684**	947
				684	947
Tier 2 securities issued by HSBC Bank plc					
$750m	Undated floating rate primary capital notes	Jun 1990		**750**	750
$500m	Undated floating rate primary capital notes	Sep 1990		**500**	500
$300m	Undated floating rate primary capital notes, series 3	Jun 1992		**300**	300
$300m	7.65% subordinated notes[6]	—	May 2025	**170**	300
				1,720	1,850
£300m	6.50% subordinated notes[7]	—	Jul 2023	**162**	406
£350m	5.375% callable subordinated step-up notes[2,7,8]	Nov 2025	Nov 2030	**73**	539
£500m	5.375% subordinated notes[7]	—	Aug 2033	**186**	900
£225m	6.25% subordinated notes[7]	—	Jan 2041	**56**	303
£600m	4.75% subordinated notes[7]	—	Mar 2046	**230**	805
				707	2,953
				2,427	4,803
Tier 2 securities issued by The Hongkong and Shanghai Banking Corporation Limited					
$400m	Primary capital undated floating rate notes (third series)	Jul 1991		**400**	400
				400	400
Tier 2 securities issued by HSBC Bank Malaysia Berhad					
MYR500m	5.05% subordinated bonds[2,9]	Nov 2022	Nov 2027	**—**	120
				—	120
Tier 2 securities issued by HSBC USA Inc.					
$250m	7.20% subordinated debentures[2]	—	Jul 2097	**223**	222
				223	222
Tier 2 securities issued by HSBC Bank USA, N.A.					
$1,000m	5.875% subordinated notes[10]	—	Nov 2034	**339**	456
$750m	5.625% subordinated notes[10]	—	Aug 2035	**366**	489
$700m	7.00% subordinated notes	—	Jan 2039	**700**	697
				1,405	1,642
Tier 2 securities issued by HSBC Bank Canada					
	Other subordinated liabilities each less than $150m[2,11]	Oct 1996	Nov 2083	**—**	9
				—	9
Securities issued by other HSBC subsidiaries					
Other subordinated liabilities each less than $200m[12]				**55**	69
Subordinated liabilities issued by HSBC subsidiaries at 31 Dec				**6,094**	9,112

1 *See paragraph below, 'Guaranteed by HSBC Holdings or HSBC Bank plc'.*
2 *These securities are ineligible for inclusion in the capital base of HSBC.*
3 *The interest rate payable after June 2030 is the sum of the three-month Libor plus 4.98%.*
4 *The interest rate payable after November 2031 is the sum of the compounded daily Sonia rate plus 2.0366%.*
5 *The value of the security partially decreased as a result of a fair value hedge gain. The instrument was held at amortised cost in 2021.*
6 *HSBC Bank plc tendered for this security in November 2022. The principal balance is $180m. The original notional value of the security was $300m.*
7 *HSBC Bank plc tendered for these securities in November 2022. The principal balances are £135m, £61m, £157m, £70m and £237m, respectively. The original notional values of these securities were £300m, £350m, £500m, £225m and £600m respectively.*
8 *These securities qualified as tier 2 capital for HSBC under CRR II until 31 December 2021 by virtue of the application of grandfathering provisions. The interest rate payable after November 2025 is the sum of the compounded daily Sonia rate plus 1.6193%.*
9 *These securities were fully repaid in November 2022.*
10 *HSBC tendered for these securities in November 2019. The principal balances are $357m and $383m respectively. The original notional values of these securities were $1,000m and $750m, respectively.*
11 *Liability accounts for HSBC Bank Canada have been reclassified to 'Liabilities of disposal groups held for sale'.*
12 *These securities are included in the capital base of HSBC, in accordance with the grandfathering provisions under CRR II. In 2022, securities of $11m matured and were redeemed.*

HSBC Holdings' subordinated liabilities

	2022 $m	2021 $m
At amortised cost	**19,727**	17,059
Designated at fair value (Note 25)	**6,700**	5,600
At 31 Dec	**26,427**	22,659

HSBC Holdings' subordinated liabilities in issue

		First call date	Maturity date	**2022 $m**	2021 $m
Tier 2 securities issued by HSBC Holdings					
Amounts owed to third parties					
$2,000m	4.25% subordinated notes[2,3]	—	Mar 2024	**1,941**	2,072
$1,500m	4.25% subordinated notes[2]	—	Aug 2025	**1,450**	1,615
$1,500m	4.375% subordinated notes[2]	—	Nov 2026	**1,450**	1,641
$264m	7.625% subordinated notes[1,4]	—	May 2032	**308**	536
$223m	7.625% subordinated notes[2,6]	—	May 2032	**223**	—
$125m	7.35% subordinated notes[1,4]	—	Nov 2032	**143**	241
$97m	7.35% subordinated notes[2,6]	—	Nov 2032	**97**	—
$1,431m	6.50% subordinated notes[1,5]	—	May 2036	**1,461**	2,032
$569m	6.50%subordinated notes[2,6]	—	May 2036	**568**	—
$1,515m	6.50% subordinated notes[1,5]	—	Sep 2037	**1,178**	2,825
$985m	6.50% subordinated notes[2,6]	—	Sep 2037	**977**	—
$961m	6.80% subordinated notes[1,5]	—	Jun 2038	**953**	1,491
$539m	6.80% subordinated notes[2,6]	—	Jun 2038	**540**	—
$1,500m	5.25% subordinated notes[2]	—	Mar 2044	**1,447**	1,946
$2,000m	4.762% subordinated notes[2]	Mar 2032	Mar 2033	**1,766**	—
$2,000m	8.113% subordinated notes[2]	Nov 2032	Nov 2033	**2,008**	—
£650m	5.75% subordinated notes[2]	—	Dec 2027	**775**	1,040
£650m	6.75% subordinated notes[2]	—	Sep 2028	**816**	877
£750m	7.00% subordinated notes[2]	—	Apr 2038	**817**	1,082
£900m	6.00% subordinated notes[2]	—	Mar 2040	**776**	1,320
£1,000m	8.201% subordinated notes[2]	Aug 2029	Nov 2034	**1,252**	—
€1,500m	3.0% subordinated notes[2]	—	Jun 2025	**1,492**	1,737
€1,000m	3.125% subordinated notes[2]	—	Jun 2028	**991**	1,304
€1,250m	6.364% subordinated notes[2]	Nov 2027	Nov 2032	**1,316**	—
SGD900m	5.25%subordinated notes[2]	Jun 2027	Jun 2032	**694**	—
JPY11,900m	2.50% subordinated notes[2]	Sep 2027	Sep 2032	**88**	—
				25,527	21,759
Amounts owed to HSBC undertakings					
$900m	10.176% subordinated step-up cumulative notes	Jun 2030	Jun 2040	**900**	900
				900	900
At 31 Dec				**26,427**	22,659

1 *Amounts owed to third parties represent securities included in the capital base of HSBC as tier 2 securities in accordance with the grandfathering provisions under CRR II.*
2 *These securities are included in the capital base of HSBC as fully CRR II-compliant tier 2 securities on an end point basis.*
3 *These subordinated notes are measured at amortised cost in HSBC Holdings, where the interest rate risk is hedged using a fair value hedge, while they are measured at fair value in the Group.*
4 *These securities were subjected to a tender and an exchange offer exercise in September 2022. The original principal amounts were $488m and $222m, respectively, and are now $264m and $125m.*
5 *These securities were subjected to an exchange offer exercise in September 2022. The original principal amounts were $2,000m, $2,500m and $1,500m, respectively, and are now $1,431m, $1,515m and $961m.*
6 *These subordinated notes were issued under an exchange offer exercise in September 2022.*

Guaranteed by HSBC Holdings or HSBC Bank plc

Capital securities guaranteed by HSBC Holdings or HSBC Bank plc were issued by the Jersey limited partnerships. The proceeds of these were lent to the respective guarantors by the limited partnerships in the form of subordinated notes. They qualified as additional tier 1 capital for HSBC under CRR II until 31 December 2021 by virtue of the application of grandfathering provisions. The capital security guaranteed by HSBC Bank plc also qualified as additional tier 1 capital for HSBC Bank plc (on a solo and a consolidated basis) under CRR II until 31 December 2021 by virtue of the same grandfathering process. Since 31 December 2021, these securities have no longer qualified as regulatory capital for HSBC or HSBC Bank plc.

These preferred securities, together with the guarantee, are intended to provide investors with rights to income and capital distributions and distributions upon liquidation of the relevant issuer that are equivalent to the rights that they would have had if they had purchased non-cumulative perpetual preference shares of the relevant issuer. There are limitations on the payment of distributions if such payments are prohibited under UK banking regulations or other requirements, if a payment would cause a breach of HSBC's capital adequacy requirements, or if HSBC Holdings or HSBC Bank plc has insufficient distributable reserves (as defined).

HSBC Holdings and HSBC Bank plc have individually covenanted that, if prevented under certain circumstances from paying distributions on the preferred securities in full, they will not pay dividends or other distributions in respect of their ordinary shares, or repurchase or redeem their ordinary shares, until the distribution on the preferred securities has been paid in full.

If the consolidated total capital ratio of HSBC Holdings falls below the regulatory minimum required or if the Directors expect it to do so in the near term, provided that proceedings have not been commenced for the liquidation, dissolution or winding up of HSBC Holdings, the holders' interests in the preferred securities guaranteed by HSBC Holdings will be exchanged for interests in preference shares issued by HSBC Holdings that have economic terms which are in all material respects equivalent to the preferred securities and their guarantee.

If the preferred securities guaranteed by HSBC Bank plc are outstanding in November 2048, or if the total capital ratio of HSBC Bank plc (on a solo or consolidated basis) falls below the regulatory minimum required, or if the Directors expect it to do so in the near term, provided that proceedings have not been commenced for the liquidation, dissolution or winding up of HSBC Bank plc, the holders' interests in the preferred security guaranteed by HSBC Bank plc will be exchanged for interests in preference shares issued by HSBC Bank plc that have economic terms which are in all material respects equivalent to the preferred security and its guarantee.

Tier 2 securities

Tier 2 capital securities are either perpetual or dated subordinated securities on which there is an obligation to pay coupons. These capital securities are included within HSBC's regulatory capital base as tier 2 capital under CRR II, either as fully eligible capital or by virtue of the application of grandfathering provisions. In accordance with CRR II, the capital contribution of all tier 2 securities is amortised for regulatory purposes in their final five years before maturity.

30 Maturity analysis of assets, liabilities and off-balance sheet commitments

The table on page 397 provides an analysis of consolidated total assets, liabilities and off-balance sheet commitments by residual contractual maturity at the balance sheet date. These balances are included in the maturity analysis as follows:

- Trading assets and liabilities (including trading derivatives but excluding reverse repos, repos and debt securities in issue) are included in the 'Due not more than 1 month' time bucket, because trading balances are typically held for short periods of time.
- Financial assets and liabilities with no contractual maturity (such as equity securities) are included in the 'Due over 5 years' time bucket. Undated or perpetual instruments are classified based on the contractual notice period, which the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are included in the 'Due over 5 years' time bucket.
- Non-financial assets and liabilities with no contractual maturity are included in the 'Due over 5 years' time bucket.
- Financial instruments included within assets and liabilities of disposal groups held for sale are classified on the basis of the contractual maturity of the underlying instruments and not on the basis of the disposal transaction.
- Liabilities under insurance contracts included in 'other financial liabilities', are irrespective of contractual maturity included in the 'Due over 5 years' time bucket in the maturity table provided below. An analysis of the expected maturity of liabilities under insurance contracts based on undiscounted cash flows is provided on page 238. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are included in the 'Due over 5 years' time bucket, although such contracts are subject to surrender and transfer options by the policyholders.
- Loan and other credit-related commitments are classified on the basis of the earliest date they can be drawn down.

HSBC

Maturity analysis of assets, liabilities and off-balance sheet commitments

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Financial assets									
Cash and balances at central banks	327,002	—	—	—	—	—	—	—	327,002
Items in the course of collection from other banks	7,297	—	—	—	—	—	—	—	7,297
Hong Kong Government certificates of indebtedness	43,787	—	—	—	—	—	—	—	43,787
Trading assets	213,234	1,333	1,343	338	425	808	222	390	218,093
Financial assets designated or otherwise mandatorily measured at fair value	2,778	101	370	658	(53)	645	2,005	38,559	45,063
Derivatives	281,710	133	30	21	64	261	1,052	875	284,146
Loans and advances to banks	72,241	13,963	8,364	880	2,344	3,058	3,900	132	104,882
Loans and advances to customers	139,935	75,487	58,983	35,642	33,738	100,027	173,306	307,736	924,854
– personal	41,835	9,142	6,664	5,754	5,779	18,375	51,104	273,487	412,140
– corporate and commercial	84,956	60,064	45,719	24,427	22,627	68,514	108,590	31,135	446,032
– financial	13,144	6,281	6,600	5,461	5,332	13,138	13,612	3,114	66,682
Reverse repurchase agreements – non-trading	171,173	51,736	16,164	5,840	2,776	3,999	2,066	—	253,754
Financial investments	46,997	79,912	31,629	12,301	13,581	41,968	79,410	119,766	425,564
Assets held for sale[1]	33,781	3,755	3,452	3,044	3,263	15,369	40,017	14,697	117,378
Accrued income and other financial assets	99,409	6,249	3,772	616	777	546	303	1,708	113,380
Financial assets at 31 Dec 2022	1,439,344	232,669	124,107	59,340	56,915	166,681	302,281	483,863	2,865,200
Non-financial assets	—	—	—	—	—	—	—	101,330	101,330
Total assets at 31 Dec 2022	1,439,344	232,669	124,107	59,340	56,915	166,681	302,281	585,193	2,966,530
Off-balance sheet commitments received									
Loan and other credit-related commitments	27,340	—	—	—	—	—	—	—	27,340
Financial liabilities									
Hong Kong currency notes in circulation	43,787	—	—	—	—	—	—	—	43,787
Deposits by banks	46,994	359	3,510	205	136	1,455	13,737	326	66,722
Customer accounts	1,388,297	93,108	47,712	14,244	17,295	4,719	4,607	321	1,570,303
– personal	657,413	55,252	35,430	10,431	12,374	2,835	2,351	2	776,088
– corporate and commercial	555,539	31,624	10,385	3,080	3,824	1,667	2,146	274	608,539
– financial	175,345	6,232	1,897	733	1,097	217	110	45	185,676
Repurchase agreements – non-trading	121,193	3,804	685	170	645	1,250	—	—	127,747
Items in the course of transmission to other banks	7,864	—	—	—	—	—	—	—	7,864
Trading liabilities	66,027	5,668	281	113	113	116	35	—	72,353
Financial liabilities designated at fair value	16,431	7,399	6,561	4,307	5,326	19,287	34,885	33,131	127,327
– debt securities in issue: covered bonds	—	—	—	—	—	—	—	—	—
– debt securities in issue: unsecured	7,057	3,621	4,792	3,156	4,289	16,234	29,940	23,510	92,599
– subordinated liabilities and preferred securities	—	—	—	—	—	1,971	3,675	3,990	9,636
– other	9,374	3,778	1,769	1,151	1,037	1,082	1,270	5,631	25,092
Derivatives	284,414	73	18	46	57	171	849	136	285,764
Debt securities in issue	4,514	7,400	7,476	4,745	3,585	9,198	19,240	21,991	78,149
– covered bonds	—	—	—	—	—	—	601	—	601
– otherwise secured	705	28	40	38	36	124	656	1,346	2,973
– unsecured	3,809	7,372	7,436	4,707	3,549	9,074	17,983	20,645	74,575
Liabilities of disposal groups held for sale[2]	76,928	4,342	5,374	6,599	8,606	2,343	8,653	1,479	114,324
Accruals and other financial liabilities	104,224	9,384	4,785	1,022	1,626	1,111	2,018	1,720	125,890
Subordinated liabilities	—	—	11	160	—	—	1,689	20,430	22,290
Total financial liabilities at 31 Dec 2022	2,160,673	131,537	76,413	31,611	37,389	39,650	85,713	79,534	2,642,520
Non-financial liabilities	—	—	—	—	—	—	—	127,982	127,982
Total liabilities at 31 Dec 2022	2,160,673	131,537	76,413	31,611	37,389	39,650	85,713	207,516	2,770,502
Off-balance sheet commitments given									
Loan and other credit-related commitments	825,781	184	75	59	210	242	975	328	827,854
– personal	242,953	2	3	—	110	199	811	300	244,378
– corporate and commercial	449,843	176	72	59	84	43	163	28	450,468
– financial	132,985	6	—	—	16	—	1	—	133,008

1 *Unallocated impairment losses in relation to disposal groups of $2.4bn and non-financial assets of $1bn that are both are presented within assets held for sale on the balance sheet have been included within non-financial assets in the table above.*

2 *$0.3bn of non-financial liabilities that are presented within liabilities of disposal groups held for sale on the balance sheet have been included within non-financial liabilities in the table above.*

Maturity analysis of assets, liabilities and off-balance sheet commitments (continued)

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Financial assets									
Cash and balances at central banks	403,018	—	—	—	—	—	—	—	403,018
Items in the course of collection from other banks	4,136	—	—	—	—	—	—	—	4,136
Hong Kong Government certificates of indebtedness	42,578	—	—	—	—	—	—	—	42,578
Trading assets	244,422	2,403	440	194	468	621	294	—	248,842
Financial assets designated at fair value	4,968	89	585	515	224	855	1,852	40,716	49,804
Derivatives	195,701	164	85	110	233	91	310	188	196,882
Loans and advances to banks	55,572	10,889	5,469	1,078	1,512	5,321	3,134	161	83,136
Loans and advances to customers	160,583	82,531	69,380	42,459	42,651	107,393	220,746	320,071	1,045,814
– personal	50,573	11,373	8,934	8,022	7,766	25,271	78,373	284,922	475,234
– corporate and commercial	97,554	64,511	52,548	29,341	28,749	72,441	127,527	32,664	505,335
– financial	12,456	6,647	7,898	5,096	6,136	9,681	14,846	2,485	65,245
Reverse repurchase agreements – non-trading	155,997	49,392	18,697	9,386	3,661	2,672	1,843	—	241,648
Financial investments	47,084	68,034	33,233	20,638	21,779	49,903	80,367	125,236	446,274
Assets held for sale[1]	58	—	—	—	180	11	549	2,033	2,831
Accrued income and other financial assets	79,019	5,932	2,935	536	357	254	263	1,689	90,985
Financial assets at 31 Dec 2021	1,393,136	219,434	130,824	74,916	71,065	167,121	309,358	490,094	2,855,948
Non-financial assets	—	—	—	—	—	—	—	101,991	101,991
Total assets at 31 Dec 2021	1,393,136	219,434	130,824	74,916	71,065	167,121	309,358	592,085	2,957,939
Off-balance sheet commitments received									
Loan and other credit-related commitments	49,061	—	—	—	—	—	—	—	49,061
Financial liabilities									
Hong Kong currency notes in circulation	42,578	—	—	—	—	—	—	—	42,578
Deposits by banks	63,660	2,695	2,419	238	125	14,653	16,734	628	101,152
Customer accounts	1,615,025	51,835	19,167	8,007	9,710	3,143	3,585	102	1,710,574
– personal	802,777	24,725	12,038	5,961	5,255	2,304	2,242	26	855,328
– corporate and commercial	623,459	22,980	5,654	1,762	3,402	706	1,167	33	659,163
– financial	188,789	4,130	1,475	284	1,053	133	176	43	196,083
Repurchase agreements – non-trading	117,625	4,613	1,716	292	142	975	377	930	126,670
Items in the course of transmission to other banks	5,214	—	—	—	—	—	—	—	5,214
Trading liabilities	79,789	3,810	346	218	223	445	73	—	84,904
Financial liabilities designated at fair value	18,080	9,437	4,514	3,287	4,485	17,422	42,116	46,161	145,502
– debt securities in issue: covered bonds	—	1,137	—	—	—	1,481	1,160	—	3,778
– debt securities in issue: unsecured	9,916	5,967	2,823	2,259	3,462	14,758	34,515	35,282	108,982
– subordinated liabilities and preferred securities	—	—	—	—	—	—	5,371	4,729	10,100
– other	8,164	2,333	1,691	1,028	1,023	1,183	1,070	6,150	22,642
Derivatives	190,233	46	11	30	25	100	288	331	191,064
Debt securities in issue	7,053	7,777	5,664	6,880	1,703	9,045	20,254	20,181	78,557
– covered bonds	—	—	—	997	—	996	860	—	2,853
– otherwise secured	957	164	42	31	193	896	1,696	1,207	5,186
– unsecured	6,096	7,613	5,622	5,852	1,510	7,153	17,698	18,974	70,518
Liabilities of disposal groups held for sale	8,753	6	9	9	8	31	68	11	8,895
Accruals and other financial liabilities	82,996	10,311	5,621	1,094	1,064	1,917	2,339	2,818	108,160
Subordinated liabilities	—	1	11	—	—	417	2,055	18,003	20,487
Total financial liabilities at 31 Dec 2021	2,231,006	90,531	39,478	20,055	17,485	48,148	87,889	89,165	2,623,757
Non-financial liabilities	—	—	—	—	—	—	—	127,405	127,405
Total liabilities at 31 Dec 2021	2,231,006	90,531	39,478	20,055	17,485	48,148	87,889	216,570	2,751,162
Off-balance sheet commitments given									
Loan and other credit-related commitments	813,491	121	133	228	254	78	931	238	815,474
– personal	239,207	34	34	54	108	32	688	238	240,395
– corporate and commercial	456,498	76	91	168	143	46	243	—	457,265
– financial	117,786	11	8	6	3	—	—	—	117,814

HSBC Holdings

Maturity analysis of assets, liabilities and off-balance sheet commitments (continued)

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Financial assets									
Cash at bank and in hand:									
– balances with HSBC undertakings	**3,210**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**3,210**
Derivatives	**2,889**	**—**	**—**	**—**	**—**	**—**	**796**	**116**	**3,801**
Loans and advances to HSBC undertakings	**—**	**2,163**	**240**	**—**	**—**	**2,035**	**4,414**	**17,913**	**26,765**
Financial assets with HSBC undertakings designated and otherwise mandatorily measured at fair value	**—**	**—**	**—**	**—**	**—**	**9,007**	**16,230**	**27,085**	**52,322**
Financial investments	**1,517**	**2,712**	**8,870**	**1,020**	**2,194**	**3,153**	**—**	**—**	**19,466**
Accrued income and other financial assets	**68**	**4,147**	**179**	**90**	**4**	**—**	**14**	**—**	**4,502**
Total financial assets at 31 Dec 2022	**7,684**	**9,022**	**9,289**	**1,110**	**2,198**	**14,195**	**21,454**	**45,114**	**110,066**
Non-financial assets	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**171,035**	**171,035**
Total assets at 31 Dec 2022	**7,684**	**9,022**	**9,289**	**1,110**	**2,198**	**14,195**	**21,454**	**216,149**	**281,101**
Financial liabilities									
Amounts owed to HSBC undertakings	**48**	**266**	**—**	**—**	**—**	**—**	**—**	**—**	**314**
Financial liabilities designated at fair value	**—**	**—**	**—**	**—**	**—**	**1,447**	**16,459**	**14,217**	**32,123**
– debt securities in issue	**—**	**—**	**—**	**—**	**—**	**1,447**	**12,784**	**11,192**	**25,423**
– subordinated liabilities and preferred securities	**—**	**—**	**—**	**—**	**—**	**—**	**3,675**	**3,025**	**6,700**
Derivatives	**2,540**	**—**	**35**	**—**	**102**	**460**	**1,638**	**2,147**	**6,922**
Debt securities in issue	**—**	**—**	**1,972**	**448**	**714**	**11,046**	**25,380**	**27,378**	**66,938**
Accruals and other financial liabilities	**722**	**450**	**648**	**61**	**35**	**—**	**14**	**31**	**1,961**
Subordinated liabilities	**—**	**—**	**—**	**—**	**—**	**1,941**	**1,492**	**16,294**	**19,727**
Total financial liabilities 31 Dec 2022	**3,310**	**716**	**2,655**	**509**	**851**	**14,894**	**44,983**	**60,067**	**127,985**
Non-financial liabilities	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**8**	**8**
Total liabilities at 31 Dec 2022	**3,310**	**716**	**2,655**	**509**	**851**	**14,894**	**44,983**	**60,075**	**127,993**
Financial assets									
Cash at bank and in hand:									
– balances with HSBC undertakings	2,590	—	—	—	—	—	—	—	2,590
Derivatives	1,101	—	—	—	—	23	585	1,102	2,811
Loans and advances to HSBC undertakings	120	750	341	—	3,017	5,608	13,333	1,939	25,108
Loans and advances to HSBC undertakings designated at fair value	—	1,759	250	1,019	—	5,987	19,455	22,938	51,408
Financial investments in HSBC undertakings	8,377	7,166	3,014	1,346	3,026	3,265	—	—	26,194
Accrued income and other financial assets	129	874	108	58	4	—	—	—	1,173
Total financial assets at 31 Dec 2021	12,317	10,549	3,713	2,423	6,047	14,883	33,373	25,979	109,284
Non-financial assets	—	—	—	—	—	—	—	163,888	163,888
Total assets at 31 Dec 2021	12,317	10,549	3,713	2,423	6,047	14,883	33,373	189,867	273,172
Financial liabilities									
Amounts owed to HSBC undertakings	—	111	—	—	—	—	—	—	111
Financial liabilities designated at fair value	397	2,484	—	—	—	1,364	11,276	16,897	32,418
– debt securities in issue	397	2,484	—	—	—	1,364	8,020	14,553	26,818
– subordinated liabilities and preferred securities	—	—	—	—	—	—	3,256	2,344	5,600
Derivatives	1,167	—	—	—	—	5	1	47	1,220
Debt securities in issue	1,051	—	—	—	—	8,525	29,889	28,018	67,483
Accruals and other financial liabilities	1,778	730	1,612	68	12	—	—	40	4,240
Subordinated liabilities	—	—	—	—	—	—	3,809	13,250	17,059
Total financial liabilities at 31 Dec 2021	4,393	3,325	1,612	68	12	9,894	44,975	58,252	122,531
Non-financial liabilities	—	—	—	—	—	—	—	311	311
Total liabilities at 31 Dec 2021	4,393	3,325	1,612	68	12	9,894	44,975	58,563	122,842

Contractual maturity of financial liabilities

The following table shows, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for trading liabilities and derivatives not treated as hedging derivatives). For this reason, balances in the following table do not agree directly with those in our consolidated balance sheet. Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Trading liabilities and derivatives not treated as hedging derivatives are included in the 'Due not more than 1 month' time bucket and not by contractual maturity.

In addition, loan and other credit-related commitments and financial guarantees are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under loan and other credit-related commitments and financial guarantees are classified on the basis of the earliest date they can be called.

Cash flows payable by HSBC under financial liabilities by remaining contractual maturities

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 1 year	Due over 1 year but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m
Deposits by banks	**47,082**	**406**	**4,024**	**16,050**	**359**	**67,921**
Customer accounts	**1,387,125**	**96,474**	**80,608**	**9,961**	**346**	**1,574,514**
Repurchase agreements – non-trading	**121,328**	**3,852**	**1,535**	**1,268**	**—**	**127,983**
Trading liabilities	**72,353**	**—**	**—**	**—**	**—**	**72,353**
Financial liabilities designated at fair value	**16,687**	**7,859**	**18,740**	**63,606**	**43,475**	**150,367**
Derivatives	**283,512**	**171**	**1,181**	**2,222**	**1,059**	**288,145**
Debt securities in issue	**4,329**	**8,217**	**17,522**	**34,283**	**26,428**	**90,779**
Subordinated liabilities	**37**	**168**	**1,395**	**7,321**	**32,946**	**41,867**
Other financial liabilities[1]	**153,597**	**8,670**	**5,994**	**3,230**	**1,704**	**173,195**
	2,086,050	**125,817**	**130,999**	**137,941**	**106,317**	**2,587,124**
Loan and other credit-related commitments	**825,781**	**184**	**344**	**1,217**	**328**	**827,854**
Financial guarantees[2]	**18,696**	**25**	**62**	**—**	**—**	**18,783**
At 31 Dec 2022	**2,930,527**	**126,026**	**131,405**	**139,158**	**106,645**	**3,433,761**
Proportion of cash flows payable in period	**85%**	**4%**	**4%**	**4%**	**3%**	
Deposits by banks	63,684	2,712	2,800	31,294	643	101,133
Customer accounts	1,613,065	54,092	37,219	7,093	138	1,711,607
Repurchase agreements – non-trading	117,643	4,615	2,157	1,359	935	126,709
Trading liabilities	84,904	—	—	—	—	84,904
Financial liabilities designated at fair value	18,335	9,760	13,606	63,834	50,953	156,488
Derivatives	190,354	192	190	1,792	1,332	193,860
Debt securities in issue	7,149	7,958	15,142	32,651	21,911	84,811
Subordinated liabilities	119	168	848	6,741	28,347	36,223
Other financial liabilities[1]	129,706	9,842	7,664	4,577	2,697	154,486
	2,224,959	89,339	79,626	149,341	106,956	2,650,221
Loan and other credit-related commitments	813,471	121	615	1,029	238	815,474
Financial guarantees[2]	27,774	6	9	6	—	27,795
At 31 Dec 2021	3,066,204	89,466	80,250	150,376	107,194	3,493,490
Proportion of cash flows payable in period	88%	3%	2%	4%	3%	

1 *Excludes financial liabilities of disposal groups.*
2 *Excludes performance guarantee contracts to which the impairment requirements in IFRS 9 are not applied.*

HSBC Holdings

HSBC Holdings' primary sources of liquidity are dividends received from subsidiaries, interest on and repayment of intra-Group loans and securities, and interest earned on its own liquid funds. HSBC Holdings also raises funds in the debt capital markets to meet the Group's minimum requirement for own funds and eligible liabilities. HSBC Holdings uses this liquidity to meet its obligations, including interest and principal repayments on external debt liabilities, operating expenses and collateral on derivative transactions.

HSBC Holdings is also subject to contingent liquidity risk by virtue of credit-related commitments and guarantees and similar contracts issued relating to its subsidiaries. Such commitments and guarantees are only issued after due consideration of HSBC Holdings' ability to finance the commitments and guarantees and the likelihood of the need arising.

HSBC Holdings actively manages the cash flows from its subsidiaries to optimise the amount of cash held at the holding company level. During 2022, consistent with the Group's capital plan, the Group's subsidiaries did not experience any significant restrictions on paying dividends or repaying loans and advances. Also, there are no foreseen restrictions envisaged with regard to planned dividends or payments. However, the ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective local regulatory capital and banking requirements, exchange controls, statutory reserves, and financial and operating performance.

HSBC Holdings currently has sufficient liquidity to meet its present requirements.

Liquidity risk in HSBC Holdings is overseen by Holdings ALCO. This risk arises because of HSBC Holdings' obligation to make payments to debt holders as they fall due and to pay its operating expenses. The liquidity risk related to these cash flows is managed by matching external debt obligations with internal loan cash flows and by maintaining an appropriate liquidity buffer that is monitored by Holdings ALCO.

The balances in the following table are not directly comparable with those on the balance sheet of HSBC Holdings as the table incorporates, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for derivatives not treated as hedging derivatives).

Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Derivatives not treated as hedging derivatives are included in the 'On demand' time bucket.

In addition, loan commitments and financial guarantees and similar contracts are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under financial guarantees and similar contracts are classified on the basis of the earliest date on which they can be called.

Cash flows payable by HSBC Holdings under financial liabilities by remaining contractual maturities

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 1 year	Due over 1 year but not more than 5 years	Due over 5 years	Total
	$m	$m	$m	$m	$m	$m
Amounts owed to HSBC undertakings	**48**	**266**	**—**	**—**	**—**	**314**
Financial liabilities designated at fair value	**11**	**72**	**1,139**	**22,921**	**19,196**	**43,339**
Derivatives	**1,182**	**177**	**1,089**	**4,231**	**1,321**	**8,000**
Debt securities in issue	**—**	**544**	**4,899**	**44,608**	**32,540**	**82,591**
Subordinated liabilities	**46**	**161**	**1,068**	**8,262**	**27,045**	**36,582**
Other financial liabilities	**721**	**458**	**745**	**14**	**31**	**1,969**
	2,008	**1,678**	**8,940**	**80,036**	**80,133**	**172,795**
Loan commitments	**—**	**—**	**—**	**—**	**—**	**—**
Financial guarantees[1]	**17,707**	**—**	**—**	**—**	**—**	**17,707**
At 31 Dec 2022	**19,715**	**1,678**	**8,940**	**80,036**	**80,133**	**190,502**
Amounts owed to HSBC undertakings	—	111	—	—	—	111
Financial liabilities designated at fair value	473	2,611	621	15,017	17,557	36,279
Derivatives	1,223	9	51	414	585	2,282
Debt securities in issue	1,196	276	1,286	43,360	30,800	76,918
Subordinated liabilities	81	155	722	7,222	20,777	28,957
Other financial liabilities	1,778	730	1,692	—	40	4,240
	4,751	3,892	4,372	66,013	69,759	148,787
Loan commitments	—	—	—	—	—	—
Financial guarantees[1]	13,746	—	—	—	—	13,746
At 31 Dec 2021	18,497	3,892	4,372	66,013	69,759	162,533

1 *Excludes performance guarantee contracts to which the impairment requirements in IFRS 9 are not applied.*

31 Offsetting of financial assets and financial liabilities

In the offsetting of financial assets and financial liabilities, the net amount is reported in the balance sheet when the offset criteria are met. This is achieved when there is a legally enforceable right to offset the recognised amounts and there is either an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

In the following table, the 'Amounts not set off in the balance sheet' include transactions where:

- the counterparty has an offsetting exposure with HSBC and a master netting or similar arrangement is in place with a right to set off only in the event of default, insolvency or bankruptcy, or the offset criteria are otherwise not satisfied; and
- cash and non-cash collateral (debt securities and equities) has been received/pledged for derivatives and reverse repurchase/repurchase, stock borrowing/lending and similar agreements to cover net exposure in the event of a default or other predetermined events.

The effect of over-collateralisation is excluded.

'Amounts not subject to enforceable netting agreements' include contracts executed in jurisdictions where the rights of offset may not be upheld under the local bankruptcy laws, and transactions where a legal opinion evidencing enforceability of the right of offset may not have been sought, or may have been unable to obtain.

For risk management purposes, the net amounts of loans and advances to customers are subject to limits, which are monitored and the relevant customer agreements are subject to review and updated, as necessary, to ensure the legal right to set off remains appropriate.

Offsetting of financial assets and financial liabilities

	Amounts subject to enforceable netting arrangements							
				Amounts not set off in the balance sheet				
	Gross amounts	Amounts offset	Net amounts in the balance sheet	Financial instruments, including non-cash collateral[1]	Cash collateral	Net amount	Amounts not subject to enforceable netting arrangements[2]	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Financial assets								
Derivatives (Note 15)[3]	**419,006**	**(140,987)**	**278,019**	**(236,373)**	**(36,486)**	**5,160**	**6,127**	**284,146**
Reverse repos, stock borrowing and similar agreements classified as:[4]								
– trading assets	**24,372**	**(236)**	**24,136**	**(24,106)**	**(29)**	**1**	**1,367**	**25,503**
– non-trading assets	**335,193**	**(102,888)**	**232,305**	**(231,432)**	**(449)**	**424**	**21,689**	**253,994**
Loans and advances to customers[5]	**28,337**	**(12,384)**	**15,953**	**(13,166)**	**—**	**2,787**	**267**	**16,220**
At 31 Dec 2022	**806,908**	**(256,495)**	**550,413**	**(505,077)**	**(36,964)**	**8,372**	**29,450**	**579,863**
Derivatives (Note 15)[3]	244,694	(53,378)	191,316	(151,304)	(36,581)	3,431	5,566	196,882
Reverse repos, stock borrowing and similar agreements classified as:[4]								
– trading assets	21,568	(222)	21,346	(21,272)	(71)	3	1,729	23,075
– non-trading assets	353,066	(136,932)	216,134	(215,769)	(165)	200	25,731	241,865
Loans and advances to customers[5]	27,045	(10,919)	16,126	(13,065)	—	3,061	327	16,453
At 31 Dec 2021	646,373	(201,451)	444,922	(401,410)	(36,817)	6,695	33,353	478,275
Financial liabilities								
Derivatives (Note 15)[3]	**419,994**	**(140,987)**	**279,007**	**(239,235)**	**(29,276)**	**10,496**	**6,757**	**285,764**
Repos, stock lending and similar agreements classified as:[4]								
– trading liabilities	**20,027**	**(236)**	**19,791**	**(19,790)**	**—**	**1**	**4**	**19,795**
– non-trading liabilities	**206,827**	**(102,888)**	**103,939**	**(103,296)**	**(249)**	**394**	**23,808**	**127,747**
Customer accounts[6]	**37,164**	**(12,384)**	**24,780**	**(13,166)**	**—**	**11,614**	**14**	**24,794**
At 31 Dec 2022	**684,012**	**(256,495)**	**427,517**	**(375,487)**	**(29,525)**	**22,505**	**30,583**	**458,100**
Derivatives (Note 15)[3]	239,597	(53,378)	186,219	(163,359)	(18,225)	4,635	4,845	191,064
Repos, stock lending and similar agreements classified as:[4]								
– trading liabilities	13,540	(222)	13,318	(13,318)	—	—	17	13,335
– non-trading liabilities	235,042	(136,932)	98,110	(97,816)	(203)	91	28,560	126,670
Customer accounts[6]	40,875	(10,919)	29,956	(13,065)	—	16,891	17	29,973
At 31 Dec 2021	529,054	(201,451)	327,603	(287,558)	(18,428)	21,617	33,439	361,042

1 *The disclosure has been enhanced in 2022 to support consistency across Group entities. All financial instruments (whether recognised on our balance sheet or as non-cash collateral received or pledged) are presented within 'financial instruments, including non-cash collateral', as balance sheet classification has no effect on the rights of offset associated with financial instruments. Comparative data have been re-presented accordingly.*

2 *These exposures continue to be secured by financial collateral, but we may not have sought or been able to obtain a legal opinion evidencing enforceability of the right of offset.*

3 *At 31 December 2022, the amount of cash margin received that had been offset against the gross derivatives assets was $8,357m (2021: $4,469m). The amount of cash margin paid that had been offset against the gross derivatives liabilities was $10,918m (2021: $9,479m).*

4 *For the amount of repos, reverse repos, stock lending, stock borrowing and similar agreements recognised on the balance sheet within 'Trading assets' of $25,503m (2021: $23,075m) and 'Trading liabilities' of $19,795m (2021: $13,335m), see the 'Funding sources and uses' table on page 210.*

5 *At 31 December 2022, the total amount of 'Loans and advances to customers' was $924,854m (2021: $1,045,814m), of which $15,953m (2021: $16,126m) was subject to offsetting.*

6 *At 31 December 2022, the total amount of 'Customer accounts' was $1,570,303m (2021: $1,710,574m), of which $24,780m (2021: $29,956m) was subject to offsetting.*

32 Called up share capital and other equity instruments

Called up share capital and share premium

HSBC Holdings ordinary shares of $0.50 each, issued and fully paid

	2022		2021	
	Number	$m	Number	$m
At 1 Jan	**20,631,520,439**	**10,316**	20,693,621,100	10,347
Shares issued under HSBC employee share plans	**10,226,221**	**5**	58,266,053	29
Shares issued in lieu of dividends	**—**	**—**	—	—
Less: Shares repurchased and cancelled	**348,139,250**	**174**	120,366,714	60
At 31 Dec[1]	**20,293,607,410**	**10,147**	20,631,520,439	10,316

HSBC Holdings share premium

	2022 $m	2021 $m
At 31 Dec	**14,664**	14,602

Total called up share capital and share premium

	2022 $m	2021 $m
At 31 Dec	**24,811**	24,918

1 *All HSBC Holdings ordinary shares in issue, excluding 325,273,407 shares held in treasury, confer identical rights, including in respect of capital, dividends and voting.*

HSBC Holdings 6.20% non-cumulative US dollar preference shares, Series A of $0.01

The 6.20% non-cumulative US dollar preference shares, Series A of $0.01 each were called by HSBC Holdings on 10 December 2020 and were redeemed and cancelled on 13 January 2021.

HSBC Holdings non-cumulative preference share of £0.01

The one non-cumulative sterling preference share of £0.01 ('sterling preference share') has been in issue since 29 December 2010 and is held by a subsidiary of HSBC Holdings. Dividends are paid quarterly at the sole and absolute discretion of the Board. The sterling preference share carries no rights of conversion into ordinary shares of HSBC Holdings and no right to attend or vote at shareholder meetings of HSBC Holdings. These securities can be redeemed by HSBC Holdings at any time, subject to prior approval by the PRA.

Other equity instruments

HSBC Holdings has included two types of additional tier 1 capital securities in its tier 1 capital, including the contingent convertible securities described below. These are accounted for as equity because HSBC does not have an obligation to transfer cash or a variable number of its own ordinary shares to holders under any circumstances outside its control. See Note 29 for additional tier 1 securities accounted for as liabilities.

Additional tier 1 capital – contingent convertible securities

HSBC Holdings continues to issue contingent convertible securities that are included in its capital base as fully CRR II-compliant additional tier 1 capital securities on an end point basis. These securities are marketed principally and subsequently allotted to corporate investors and fund managers. The net proceeds of the issuances are typically used for HSBC Holdings' general corporate purposes and to further strengthen its capital base to meet requirements under CRR II. These securities bear a fixed rate of interest until their initial call dates. After the initial call dates, if they are not redeemed, the securities will bear interest at rates fixed periodically in advance for five-year periods based on credit spreads, fixed at issuance, above prevailing market rates. Interest on the contingent convertible securities will be due and payable only at the sole discretion of HSBC Holdings, and HSBC Holdings has sole and absolute discretion at all times to cancel for any reason (in whole or part) any interest payment that would otherwise be payable on any payment date. Distributions will not be paid if they are prohibited under UK banking regulations or if the Group has insufficient reserves or fails to meet the solvency conditions defined in the securities' terms.

The contingent convertible securities are undated and are repayable at the option of HSBC Holdings in whole typically at the initial call date or on any fifth anniversary after this date. In addition, the securities are repayable at the option of HSBC in whole for certain regulatory or tax reasons. Any repayments require the prior consent of the PRA. These securities rank *pari passu* with HSBC Holdings' sterling preference shares and therefore rank ahead of ordinary shares. The contingent convertible securities will be converted into fully paid ordinary shares of HSBC Holdings at a predetermined price, should HSBC's consolidated non-transitional CET1 ratio fall below 7.0%. Therefore, in accordance with the terms of the securities, if the non-transitional CET1 ratio breaches the 7.0% trigger, the securities will convert into ordinary shares at fixed contractual conversion prices in the issuance currencies of the relevant securities, subject to anti-dilution adjustments.

HSBC's additional tier 1 capital – contingent convertible securities in issue which are accounted for in equity

		First call date	2022 $m	2021 $m
$2,250m	6.375% perpetual subordinated contingent convertible securities	Sep 2024	**2,250**	2,250
$2,450m	6.375% perpetual subordinated contingent convertible securities	Mar 2025	**2,450**	2,450
$3,000m	6.000% perpetual subordinated contingent convertible securities	May 2027	**3,000**	3,000
$2,350m	6.250% perpetual subordinated contingent convertible securities[1]	Mar 2023	**2,350**	2,350
$1,800m	6.500% perpetual subordinated contingent convertible securities	Mar 2028	**1,800**	1,800
$1,500m	4.600% perpetual subordinated contingent convertible securities[2]	Dec 2030	**1,500**	1,500
$1,000m	4.000% perpetual subordinated contingent convertible securities[3]	Mar 2026	**1,000**	1,000
$1,000m	4.700% perpetual subordinated contingent convertible securities[4]	Mar 2031	**1,000**	1,000
€1,500m	5.250% perpetual subordinated contingent convertible securities[5]	Sep 2022	**—**	1,945
€1,000m	6.000% perpetual subordinated contingent convertible securities	Sep 2023	**1,123**	1,123
€1,250m	4.750% perpetual subordinated contingent convertible securities	Jul 2029	**1,422**	1,422
£1,000	5.875% perpetual subordinated contingent convertible securities	Sep 2026	**1,301**	1,301
SGD1,000m	4.700% perpetual subordinated contingent convertible securities[6]	Jun 2022	**—**	723
SGD750m	5.000% perpetual subordinated contingent convertible securities	Sep 2023	**550**	550
At 31 Dec			**19,746**	22,414

1 *This security was called by HSBC Holdings on 30 January 2023 and is expected to be redeemed and cancelled on 23 March 2023.*
2 *This security was issued by HSBC Holdings on 17 December 2020. The first call date is six calendar months prior to the reset date of 17 June 2031.*
3 *This security was issued by HSBC Holdings on 9 March 2021. The first call date is six calendar months prior to the reset date of 9 September 2026.*
4 *This security was issued by HSBC Holdings on 9 March 2021. The first call date is six calendar months prior to the reset date of 9 September 2031.*
5 *This security was called by HSBC Holdings on 9 August 2022 and was redeemed and cancelled on 16 September 2022.*
6 *This security was called by HSBC Holdings on 4 May 2022 and was redeemed and cancelled on 8 June 2022.*

Shares under option

For details of the options outstanding to subscribe for HSBC Holdings ordinary shares under the HSBC Holdings Savings-Related Share Option Plan (UK), see Note 5.

Aggregate options outstanding under these plans

31 Dec 2022			31 Dec 2021		
Number of HSBC Holdings ordinary shares	**Usual period of exercise**	**Exercise price**	Number of HSBC Holdings ordinary shares	Usual period of exercise	Exercise price
115,650,723	**2021 to 2028**	**£2.6270–£5.9640**	123,196,850	2020 to 2027	£2.6270–5.9640

Maximum obligation to deliver HSBC Holdings ordinary shares

At 31 December 2022, the maximum obligation to deliver HSBC Holdings ordinary shares under all of the above option arrangements and the HSBC International Employee Share Purchase Plan, together with long-term incentive awards and deferred share awards granted under the HSBC Share Plan 2011, was 240,612,019 (2021: 224,974,433). The total number of shares at 31 December 2022 held by employee benefit trusts that may be used to satisfy such obligations to deliver HSBC Holdings ordinary shares was 12,315,711 (2021: 9,297,415).

33 Contingent liabilities, contractual commitments and guarantees

	HSBC		HSBC Holdings[1]	
	2022 $m	2021 $m	**2022 $m**	2021 $m
Guarantees and other contingent liabilities:				
– financial guarantees	**18,783**	27,795	**17,707**	13,746
– performance and other guarantees	**88,240**	85,534	**—**	—
– other contingent liabilities	**676**	858	**90**	133
At 31 Dec	**107,699**	114,187	**17,797**	13,879
Commitments:[2]				
– documentary credits and short-term trade-related transactions	**8,241**	8,827	**—**	—
– forward asset purchases and forward deposits placed	**50,852**	47,184	**—**	—
– standby facilities, credit lines and other commitments to lend	**768,761**	759,463	**—**	—
At 31 Dec	**827,854**	815,474	**—**	—

1 *Financial guarantees by HSBC Holdings are all in favour of other Group entities.*
2 *Includes $618,788m of commitments at 31 December 2022 (31 December 2021: $627,637m), to which the impairment requirements in IFRS 9 are applied where HSBC has become party to an irrevocable commitment.*

The preceding table discloses the nominal principal amounts of off-balance sheet liabilities and commitments for the Group, which represent the maximum amounts at risk should the contracts be fully drawn upon and the clients default. As a significant portion of guarantees and commitments are expected to expire without being drawn upon, the total of the nominal principal amounts is not indicative of future liquidity requirements. The expected credit loss provision relating to guarantees and commitments under IFRS 9 is disclosed in Note 28.

The majority of the guarantees have a term of less than one year, while guarantees with terms of more than one year are subject to HSBC's annual credit review process.

Contingent liabilities arising from legal proceedings, regulatory and other matters against Group companies are excluded from this note but are disclosed in Notes 28 and 35.

Financial Services Compensation Scheme

The Financial Services Compensation Scheme ('FSCS') provides compensation, up to certain limits, to eligible customers of financial services firms that are unable, or likely to be unable, to pay claims against them. The FSCS may impose a further levy on the group to the extent the industry levies imposed to date are not sufficient to cover the compensation due to customers in any future possible collapse. The ultimate FSCS levy to the industry as a result of a collapse cannot be estimated reliably. It is dependent on various uncertain factors including the potential recovery of assets by the FSCS, changes in the level of protected products (including deposits and investments) and the population of FSCS members at the time. In December 2022, the FCA announced that it expects to review various elements of the scheme to ensure consumers are appropriately and proportionately protected, with costs distributed across industry levy payers in a fair and sustainable way, with a view to deliver the majority of changes by the end of the 2023/24 financial year.

Associates

HSBC's share of associates' contingent liabilities, contractual commitments and guarantees amounted to $64.8bn at 31 December 2022 (2021: $63.5bn). No matters arose where HSBC was severally liable.

34 Finance lease receivables

HSBC leases a variety of assets to third parties under finance leases, including transport assets (such as aircraft), property and general plant and machinery. At the end of lease terms, assets may be sold to third parties or leased for further terms. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income.

The table below excludes finance lease receivables reclassified on the balance sheet to 'Assets held for sale' in accordance with IFRS 5. Net investment in finance leases of $1,502m was reclassified to 'Assets held for sale' as a result of the planned sale of our banking business in Canada.

	2022			2021		
	Total future minimum payments	**Unearned finance income**	**Present value**	Total future minimum payments	Unearned finance income	Present value
	$m	**$m**	**$m**	$m	$m	$m
Lease receivables:						
No later than one year	**2,159**	**(236)**	**1,923**	3,298	(303)	2,995
One to two years	**1,652**	**(201)**	**1,451**	2,303	(242)	2,061
Two to three years	**1,391**	**(161)**	**1,230**	1,645	(192)	1,453
Three to four years	**906**	**(131)**	**775**	1,225	(146)	1,079
Four to five years	**613**	**(112)**	**501**	795	(113)	682
Later than one year and no later than five years	**4,562**	**(605)**	**3,957**	5,968	(693)	5,275
Later than five years	**4,064**	**(736)**	**3,328**	4,044	(528)	3,516
At 31 Dec	**10,785**	**(1,577)**	**9,208**	13,310	(1,524)	11,786

35 Legal proceedings and regulatory matters

HSBC is party to legal proceedings and regulatory matters in a number of jurisdictions arising out of its normal business operations. Apart from the matters described below, HSBC considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in Note 1. While the outcomes of legal proceedings and regulatory matters are inherently uncertain, management believes that, based on the information available to it, appropriate provisions have been made in respect of these matters as at 31 December 2022 (see Note 28). Where an individual provision is material, the fact that a provision has been made is stated and quantified, except to the extent that doing so would be seriously prejudicial. Any provision recognised does not constitute an admission of wrongdoing or legal liability. It is not practicable to provide an aggregate estimate of potential liability for our legal proceedings and regulatory matters as a class of contingent liabilities.

Bernard L. Madoff Investment Securities LLC

Various non-US HSBC companies provided custodial, administration and similar services to a number of funds incorporated outside the US whose assets were invested with Bernard L. Madoff Investment Securities LLC ('Madoff Securities'). Based on information provided by Madoff Securities as at 30 November 2008, the purported aggregate value of these funds was $8.4bn, including fictitious profits reported by Madoff. Based on information available to HSBC, the funds' actual transfers to Madoff Securities minus their actual withdrawals from Madoff Securities during the time HSBC serviced the funds are estimated to have totalled approximately $4bn. Various HSBC companies have been named as defendants in lawsuits arising out of Madoff Securities' fraud.

US litigation: The Madoff Securities Trustee has brought lawsuits against various HSBC companies and others, seeking recovery of transfers from Madoff Securities to HSBC in an amount not specified, and these lawsuits remain pending in the US Bankruptcy Court for the Southern District of New York (the 'US Bankruptcy Court').

Certain Fairfield entities (together, 'Fairfield') (in liquidation since July 2009) have brought a lawsuit in the US against fund shareholders, including HSBC companies that acted as nominees for clients, seeking restitution of redemption payments. In August 2022, the US District Court for the Southern District of New York (the 'New York District Court') affirmed earlier decisions by the US Bankruptcy Court that dismissed the majority of the liquidators' claims (against most of the HSBC companies). In September 2022, the remaining defendants before the US Bankruptcy Court sought leave to appeal and the liquidators filed appeals to the US Court of Appeals for the Second Circuit, which are currently pending. Meanwhile, proceedings before the US Bankruptcy Court with respect to the remaining claims are ongoing.

UK litigation: The Madoff Securities Trustee has filed a claim against various HSBC companies in the High Court of England and Wales, seeking recovery of transfers from Madoff Securities to HSBC. The claim has not yet been served and the amount claimed has not been specified.

Cayman Islands litigation: In February 2013, Primeo Fund ('Primeo') (in liquidation since April 2009) brought an action against HSBC Securities Services Luxembourg ('HSSL') and Bank of Bermuda (Cayman) Limited (now known as HSBC Cayman Limited), alleging breach of contract and breach of fiduciary duty and claiming monetary damages. Following dismissal of Primeo's action by the lower and appellate courts in the Cayman Islands, in 2019, Primeo appealed to the UK Privy Council. During 2021, the UK Privy Council held two separate hearings in connection with Primeo's appeal. Judgment was given against HSBC in respect of the first hearing and judgment is pending in respect of the second hearing.

Luxembourg litigation: In April 2009, Herald Fund SPC ('Herald') (in liquidation since July 2013) brought an action against HSSL before the Luxembourg District Court, seeking restitution of cash and securities that Herald purportedly lost because of Madoff Securities' fraud, or money damages. The Luxembourg District Court dismissed Herald's securities restitution claim, but reserved Herald's cash restitution and money damages claims. Herald has appealed this judgment to the Luxembourg Court of Appeal, where the matter is pending. In late 2018, Herald brought additional claims against HSSL and HSBC Bank plc before the Luxembourg District Court, seeking further restitution and damages.

In October 2009, Alpha Prime Fund Limited ('Alpha Prime') brought an action against HSSL before the Luxembourg District Court, seeking the restitution of securities, or the cash equivalent, or money damages. In December 2018, Alpha Prime brought additional claims seeking damages against various HSBC companies. These matters are currently pending before the Luxembourg District Court.

In December 2014, Senator Fund SPC ('Senator') brought an action against HSSL before the Luxembourg District Court, seeking restitution of securities, or the cash equivalent, or money damages. In April 2015, Senator commenced a separate action against the Luxembourg branch of HSBC Bank plc asserting identical claims. In December 2018, Senator brought additional claims against HSSL and HSBC Bank plc Luxembourg branch, seeking restitution of Senator's securities or money damages. These matters are currently pending before the Luxembourg District Court.

There are many factors that may affect the range of possible outcomes, and any resulting financial impact, of the various Madoff-related proceedings described above, including but not limited to the multiple jurisdictions in which the proceedings have been brought. Based upon the information currently available, management's estimate of the possible aggregate damages that might arise as a result of all claims in the various Madoff-related proceedings is around $600m, excluding costs and interest. Due to uncertainties and limitations of this estimate, any possible damages that might ultimately arise could differ significantly from this amount.

Anti-money laundering and sanctions-related matters

In December 2012, HSBC Holdings entered into a number of agreements, including an undertaking with the UK Financial Services Authority (replaced with a Direction issued by the UK Financial Conduct Authority ('FCA') in 2013 and again in 2020) as well as a cease-and-desist order with the US Federal Reserve Board ('FRB'), both of which contained certain forward-looking anti-money laundering ('AML') and sanctions-related obligations. For several years thereafter, HSBC retained a Skilled Person under section 166 of the Financial Services and Markets Act and an Independent Consultant under the FRB cease-and-desist order to produce periodic assessments of the Group's AML and sanctions compliance programme. The Skilled Person completed its engagement in the second quarter of 2021, and the FCA determined that no further Skilled Person work is required. Separately, the Independent Consultant's engagement is now complete and, in August 2022, the FRB terminated its cease-and-desist order.

Since November 2014, a number of lawsuits have been filed in federal courts in the US against various HSBC companies and others on behalf of plaintiffs who are, or are related to, victims of terrorist attacks in the Middle East. In each case, it is alleged that the defendants aided and abetted the unlawful conduct of various sanctioned parties in violation of the US Anti-Terrorism Act. Nine actions remain pending in federal courts and HSBC's motions to dismiss have been granted in five of these cases. In September 2022 and January 2023, respectively, the appellate courts affirmed the dismissals of two of the cases, and the plaintiffs' requests for review of these decisions by the full appellate courts have been denied. The dismissals in the other cases are subject to appeal. The four remaining actions are at an early stage.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of the pending matters, including the timing or any possible impact on HSBC, which could be significant.

London interbank offered rates, European interbank offered rates and other benchmark interest rate investigations and litigation

Euro interest rate derivatives: In December 2016, the European Commission ('EC') issued a decision finding that HSBC, among other banks, engaged in anti-competitive practices in connection with the pricing of euro interest rate derivatives, and the EC imposed a fine on HSBC based on a one-month infringement in 2007. The fine was annulled in 2019 and a lower fine was imposed in 2021. In January 2023, the European Court of Justice dismissed an appeal by HSBC and upheld the EC's findings on HSBC's liability. A separate appeal by HSBC concerning the amount of the fine remains pending before the General Court of the European Union.

US dollar Libor: Beginning in 2011, HSBC and other panel banks have been named as defendants in a number of private lawsuits filed in the US with respect to the setting of US dollar Libor. The complaints assert claims under various US federal and state laws, including antitrust and racketeering laws and the Commodity Exchange Act ('US CEA'). The lawsuits include individual and putative class actions, most of which have been transferred and/or consolidated for pre-trial purposes before the New York District Court. HSBC has reached class settlements with five groups of plaintiffs, and the court has approved these settlements. HSBC has also resolved several of the individual actions, although a number of other US dollar Libor-related actions remain pending.

Singapore interbank offered rate ('Sibor') and Singapore swap offer rate ('SOR'): In 2016, The Hongkong and Shanghai Banking Corporation Limited and other panel banks were named as defendants in a putative class action filed in the New York District Court on behalf of persons who transacted in products related to the Sibor and SOR benchmark rates. The complaint alleged, among other things, misconduct related to these benchmark rates in violation of US antitrust, commodities and racketeering laws, and state law.

In October 2021, The Hongkong and Shanghai Banking Corporation Limited reached a settlement-in-principle with the plaintiffs to resolve this action, the agreement for which was executed in May 2022. The court granted final approval of the settlement in November 2022.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of the pending matters, including the timing or any possible impact on HSBC, which could be significant.

Foreign exchange-related investigations and litigation

In December 2016, Brazil's Administrative Council of Economic Defense initiated an investigation into the onshore foreign exchange market and identified a number of banks, including HSBC, as subjects of its investigation, which remains ongoing.

In June 2020, the Competition Commission of South Africa, having initially referred a complaint for proceedings before the South African Competition Tribunal in February 2017, filed a revised complaint against 28 financial institutions, including HSBC Bank plc and HSBC Bank USA N.A. ('HSBC Bank USA'), for alleged anti-competitive behaviour in the South African foreign exchange market. In December 2021, a hearing on HSBC Bank plc's and HSBC Bank USA's applications to dismiss the revised complaint took place before the South African Competition Tribunal, where a decision remains pending.

Beginning in 2013, various HSBC companies and other banks have been named as defendants in a number of putative class actions filed in, or transferred to, the New York District Court arising from allegations that the defendants conspired to manipulate foreign exchange rates. HSBC has reached class settlements with two groups of plaintiffs, including direct and indirect purchasers of foreign exchange products, and the court has granted final approval of these settlements. A putative class action by a group of retail customers of foreign exchange products remains pending.

In 2018, complaints alleging foreign exchange-related misconduct were filed in the New York District Court and the High Court of England and Wales against HSBC and other defendants by certain plaintiffs that opted out of the direct purchaser class action settlement in the US. In December 2022, HSBC reached a settlement-in-principle with the plaintiffs to resolve these matters. The settlement remains subject to the negotiation of definitive documentation. Additionally, in January 2023, HSBC reached a settlement-in-principle with plaintiffs in Israel to resolve a class action lawsuit filed in the local courts alleging foreign exchange-related misconduct. The settlement remains subject to the negotiation of definitive documentation and court approval. Lawsuits alleging foreign exchange-related misconduct remain pending against HSBC and other banks in courts in Brazil. It is possible that additional civil actions will be initiated against HSBC in relation to its historical foreign exchange activities.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

Precious metals fix-related litigation

Gold: Beginning in December 2015, numerous putative class actions were filed in the Ontario and Quebec Superior Courts of Justice against various HSBC companies and other financial institutions. The plaintiffs allege that, among other things, from January 2004 to March 2014, the defendants conspired to manipulate the price of gold and gold derivatives in violation of the Canadian Competition Act and common law. These actions are ongoing.

Silver: Beginning in July 2014, numerous putative class actions were filed in federal district courts in New York, naming HSBC and other members of The London Silver Market Fixing Limited as defendants. The complaints, which were consolidated in the New York District Court, allege that, from January 2007 to December 2013, the defendants conspired to manipulate the price of silver and silver derivatives for their collective benefit in violation of US antitrust laws, the US CEA and New York state law. In February 2022, following the conclusion of pre-class certification discovery, the defendants filed a motion seeking to dismiss the plaintiffs' antitrust claims, which remains pending.

In April 2016, two putative class actions were filed in the Ontario and Quebec Superior Courts of Justice against various HSBC companies and other financial institutions. The plaintiffs in both actions allege that, from January 1999 to August 2014, the defendants conspired to manipulate the price of silver and silver derivatives in violation of the Canadian Competition Act and common law. These actions are ongoing.

Platinum and palladium: Between late 2014 and early 2015, numerous putative class actions were filed in the New York District Court, naming HSBC and other members of The London Platinum and Palladium Fixing Company Limited as defendants. The complaints allege that, from January 2008 to November 2014, the defendants conspired to manipulate the price of platinum group metals and related financial products for their collective benefit in violation of US antitrust laws and the US CEA. In March 2020, the court granted the defendants' motion to dismiss the plaintiffs' third amended complaint but granted the plaintiffs leave to re-plead certain claims. The plaintiffs have filed an appeal.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these matters, including the timing or any possible impact on HSBC, which could be significant.

Film finance litigation

In June 2020, two separate investor groups issued claims against HSBC UK Bank plc (as successor to HSBC Private Bank (UK) Limited ('PBGB')) in the High Court of England and Wales in connection with PBGB's role in the development of Eclipse film finance schemes. These actions are ongoing.

In April 2021, HSBC UK Bank plc (as successor to PBGB) was served with a claim issued in the High Court of England and Wales in connection with PBGB's role in the development of the Zeus film finance schemes. In October 2022, this claim was discontinued.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of the pending matters, including the timing or any possible impact on HSBC, which could be significant.

Other regulatory investigations, reviews and litigation

HSBC Holdings and/or certain of its affiliates are subject to a number of other investigations and reviews by various regulators and competition and law enforcement authorities, as well as litigation, in connection with various matters relating to the firm's businesses and operations, including:

- investigations by tax administration, regulatory and law enforcement authorities in Argentina, India and elsewhere in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation;
- an investigation by the US Commodity Futures Trading Commission ('CFTC') regarding interest rate swap transactions related to bond issuances, among other things. HSBC has reached a settlement-in-principle with the CFTC's Division of Enforcement to resolve this investigation. The settlement is subject to final approval by the CFTC;
- investigations by the CFTC and US Securities and Exchange Commission ('SEC') concerning compliance with records preservation requirements relating to the use of unapproved electronic messaging platforms for business communications. HSBC has reached settlements-in-principle with the CFTC's and SEC's Divisions of Enforcement to resolve these investigations. The settlements are subject to the negotiation of definitive documentation and final approval by the CFTC and SEC;
- an investigation by the PRA in connection with depositor protection arrangements in the UK;
- an investigation by the FCA in connection with collections and recoveries operations in the UK;
- an investigation by the UK Competition and Markets Authority into potentially anti-competitive arrangements involving historical trading activities relating to certain UK-based fixed income products and related financial instruments;
- a putative class action brought in the New York District Court relating to the Mexican government bond market;
- two group actions pending in the US courts and a claim issued in the High Court of England and Wales in connection with HSBC Bank plc's role as a correspondent bank to Stanford International Bank Ltd from 2003 to 2009; and
- litigation brought against various HSBC companies in the US courts relating to residential mortgage-backed securities, based primarily on (a) claims brought against HSBC Bank USA in connection with its role as trustee on behalf of various securitisation trusts; and (b) claims against several HSBC companies seeking that the defendants repurchase various mortgage loans.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

36 Related party transactions

Related parties of the Group and HSBC Holdings include subsidiaries, associates, joint ventures, post-employment benefit plans for HSBC employees, Key Management Personnel ('KMP') as defined by IAS 24, close family members of KMP and entities that are controlled or jointly controlled by KMP or their close family members. KMP are defined as those persons having authority and responsibility for planning, directing and controlling the activities of HSBC Holdings. These individuals also constitute 'senior management' for the purposes of the Hong Kong Listing Rules. In applying IAS 24, it was determined that for this financial reporting period all KMP included Directors, former Directors and senior management listed on pages 240 to 246 except for the roles of Group Chief Legal Officer, Group Head of Internal Audit, Group Chief Human Resources Officer, Group Chief Sustainability Officer, Group Head of Strategy, Group Chief Communications and Brand Officer, and Group Company Secretary and Chief Governance Officer who do not meet the criteria for KMP as provided for in the standard.

Particulars of transactions with related parties are tabulated below. The disclosure of the year-end balance and the highest amounts outstanding during the year is considered to be the most meaningful information to represent the amount of the transactions and outstanding balances during the year.

Key Management Personnel

Details of Directors' remuneration and interests in shares are disclosed in the 'Directors' remuneration report' on pages 276 to 301. IAS 24 'Related Party Disclosures' requires the following additional information for key management compensation.

Compensation of Key Management Personnel

	2022	2021	2020
	$m	$m	$m
Short-term employee benefits	**52**	50	39
Post-employment benefits	**1**	—	—
Other long-term employee benefits	**8**	6	5
Share-based payments	**26**	27	20
Year ended 31 Dec	**87**	83	64

Shareholdings, options and other securities of Key Management Personnel

	2022	2021
	(000s)	(000s)
Number of options held over HSBC Holdings ordinary shares under employee share plans	**35**	35
Number of HSBC Holdings ordinary shares held beneficially and non-beneficially	**18,185**	13,529
Number of other HSBC securities held	**228**	228
At 31 Dec	**18,448**	13,792

Advances and credits, guarantees and deposit balances during the year with Key Management Personnel

	2022		2021	
	Balance at 31 Dec	**Highest amounts outstanding during year**	Balance at 31 Dec	Highest amounts outstanding during year
	$m	**$m**	$m	$m
Key Management Personnel				
Advances and credits[1]	**16**	**25**	373	401
Guarantees	**—**	**—**	25	45
Deposits	**53**	**123**	284	3,190

1 *Advances and credits entered into by subsidiaries of HSBC Holdings plc during 2022 with Directors and former Directors, disclosed pursuant to section 413 of the Companies Act 2006, totalled $2.5m (2021: $2.8m) and the total value of guarantees entered into on behalf of the Directors and former Directors was $nil (2021: $nil).*

Some of the transactions were connected transactions as defined by the Rules Governing The Listing of Securities on The Stock Exchange of Hong Kong Limited, but were exempt from any disclosure requirements under the provisions of those rules. The above transactions were made in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with persons of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features.

Associates and joint ventures

The Group provides certain banking and financial services to associates and joint ventures including loans, overdrafts, interest and non-interest bearing deposits and current accounts. Details of the interests in associates and joint ventures are given in Note 18.

Transactions and balances during the year with associates and joint ventures

	2022		2021	
	Highest balance during the year	**Balance at 31 Dec**	Highest balance during the year	Balance at 31 Dec
	$m	**$m**	$m	$m
Unsubordinated amounts due from joint ventures	**140**	**90**	160	96
Unsubordinated amounts due from associates	**7,378**	**6,594**	4,527	4,188
Amounts due to associates	**2,548**	**1,295**	3,397	1,070
Amounts due to joint ventures	**57**	**53**	102	44
Fair value of derivative assets with associates	**1,205**	**841**	936	465
Fair value of derivative liabilities with associates	**4,319**	**3,648**	696	555
Guarantees and commitments	**513**	**293**	1,016	347

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Post-employment benefit plans

At 31 December 2022, $2.9bn (2021: $3.4bn) of HSBC post-employment benefit plan assets were under management by HSBC companies, earning management fees of $13m in 2022 (2021: $14m). At 31 December 2022, HSBC's post-employment benefit plans had placed deposits of $369m (2021: $476m) with its banking subsidiaries, earning interest payable to the schemes of nil (2021: nil). The above outstanding balances arose from the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

The combined HSBC Bank (UK) Pension Scheme enters into swap transactions with HSBC to manage inflation and interest rate sensitivity of its liabilities and selected assets. At 31 December 2022, the gross notional value of the swaps was $6.6bn (2021: $7.4bn). These swaps had a positive fair value to the scheme of $0.5bn (2021: $1.0bn); and HSBC had delivered collateral of $0.5bn (2021: $1.0bn) to the scheme in respect of these arrangements. All swaps were executed at prevailing market rates and within standard market bid/offer spreads.

HSBC Holdings

Details of HSBC Holdings' subsidiaries are shown in Note 38.

Transactions and balances during the year with subsidiaries

	2022		2021	
	Highest balance during the year	**Balance at 31 Dec**	Highest balance during the year	Balance at 31 Dec
	$m	**$m**	$m	$m
Assets				
Cash and balances with HSBC undertakings	**7,421**	**3,210**	3,397	2,590
Financial assets with HSBC undertakings designated and otherwise mandatorily measured at fair value	**52,322**	**52,322**	64,686	51,408
Derivatives	**5,380**	**3,801**	4,187	2,811
Loans and advances to HSBC undertakings	**26,765**	**26,765**	27,142	25,108
Prepayments, accrued income and other assets	**4,893**	**4,803**	1,555	1,135
Investments in subsidiaries	**167,542**	**167,542**	163,211	163,211
Total related party assets at 31 Dec	**264,323**	**258,443**	264,178	246,263
Liabilities				
Amounts owed to HSBC undertakings	**314**	**314**	340	111
Derivatives	**8,318**	**6,922**	2,872	1,220
Accruals, deferred income and other liabilities	**1,375**	**429**	2,036	1,732
Subordinated liabilities	**900**	**900**	900	900
Total related party liabilities at 31 Dec	**10,907**	**8,565**	6,148	3,963
Guarantees and commitments	**17,707**	**17,707**	16,477	13,746

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Some employees of HSBC Holdings are members of the HSBC Bank (UK) Pension Scheme, which is sponsored by a separate Group company. HSBC Holdings incurs a charge for these employees equal to the contributions paid into the scheme on their behalf. Disclosure in relation to the scheme is made in Note 5.

37 Events after the balance sheet date

A second interim dividend for 2022 of $0.23 per ordinary share (a distribution of approximately $4,593m) was approved by the Directors after 31 December 2022. HSBC Holdings called $2,350m 6.250% perpetual subordinated contingent convertible securities on 30 January 2023. The security is expected to be redeemed and be cancelled on 23 March 2023. HSBC Holdings also exercised the call option on AUD350m and AUD650m MREL on 13 January 2023 callable on 16 February 2023. The redemption took place on 16 February 2023. These accounts were approved by the Board of Directors on 21 February 2023 and authorised for issue.

38 HSBC Holdings' subsidiaries, joint ventures and associates

In accordance with section 409 of the Companies Act 2006 a list of HSBC Holdings plc subsidiaries, joint ventures and associates, the registered office addresses and the effective percentages of equity owned at 31 December 2022 are disclosed below.

Unless otherwise stated, the share capital comprises ordinary or common shares that are held by Group subsidiaries. The ownership percentage is provided for each undertaking. The undertakings below are consolidated by HSBC unless otherwise indicated.

Subsidiaries

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
452 TALF Plus ABS Opportunities SPV LLC	100.00		15
452 TALF SPV LLC	100.00		15
Almacenadora Banpacifico S.A. (In Liquidation)	99.99		16
Assetfinance December (F) Limited	100.00		17
Assetfinance December (H) Limited	100.00		18
Assetfinance December (P) Limited	100.00		18
Assetfinance December (R) Limited	100.00		18
Assetfinance June (A) Limited	100.00		18
Assetfinance June (D) Limited	100.00		17
Assetfinance Limited	100.00		18
Assetfinance March (B) Limited	100.00		19
Assetfinance March (D) Limited	100.00		17
Assetfinance March (F) Limited	100.00		18
Assetfinance September (F) Limited	100.00		18
Assetfinance September (G) Limited	100.00		17
AXA Insurance Pte. Ltd.	100.00		1, 20
B&Q Financial Services Limited	100.00		18
Banco HSBC S.A.	100.00		21
Banco Nominees (Guernsey) Limited	100.00		22
Banco Nominees 2 (Guernsey) Limited	100.00		22
Banco Nominees Limited	100.00		23
Beau Soleil Limited Partnership	N/A		0, 46
Beijing Miyun HSBC Rural Bank Company Limited	100.00		12, 24
BentallGreenOak China Real Estate Investments L.P.	N/A		0, 1, 25
Canada Crescent Nominees (UK) Limited	100.00		18
Canada Square Nominees (UK) Limited	100.00		18
Capco/Cove, Inc.	100.00		26
Card-Flo #1, Inc.	100.00		15
Card-Flo #3, Inc.	100.00		15
CC&H Holdings LLC	100.00		27
CCF & Partners Asset Management Limited	100.00	(99.99)	18
CCF Holding (Liban) S.A.L. (In Liquidation)	74.99		28
Charterhouse Administrators (D.T.) Limited	100.00	(99.99)	18
Charterhouse Management Services Limited	100.00	(99.99)	18
Charterhouse Pensions Limited	100.00		18
Chongqing Dazu HSBC Rural Bank Company Limited	100.00		12, 29
Chongqing Fengdu HSBC Rural Bank Company Limited	100.00		12, 30
Chongqing Rongchang HSBC Rural Bank Company Limited	100.00		12, 31
COIF Nominees Limited	N/A		0, 18
Corsair IV Financial Services Capital Partners - B, LP	N/A		0, 1, 32
Dalian Pulandian HSBC Rural Bank Company Limited	100.00		12, 33
Decision One Mortgage Company, LLC	N/A		0, 34
Dem 9	100.00	(99.99)	4, 35
Dempar 1	100.00	(99.99)	4, 35
Desarrollo Turistico, S.A. de C.V. (In Liquidation)	100.00	(99.99)	16
Electronic Data Process México, S.A. de C.V.	100.00		1, 16
Eton Corporate Services Limited	100.00		22
Far East Leasing SA (In Dissolution)	100.00		36
Flandres Contentieux S.A.	100.00	(99.99)	35
Foncière Elysées	100.00	(99.99)	35
Fujian Yongan HSBC Rural Bank Company Limited	100.00		12, 37
Fulcher Enterprises Company Limited	100.00	(62.14)	38
Fundacion HSBC, A.C.	100.00	(99.99)	11, 16
Giller Ltd.	100.00		26

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
GPIF Co-Investment, LLC	N/A		0, 15
Griffin International Limited	100.00		18
Grupo Financiero HSBC, S. A. de C. V.	99.99		16
Guangdong Enping HSBC Rural Bank Company Limited	100.00		12, 39
Guangzhou HSBC Real Estate Company Ltd	100.00		1, 12, 40
Hang Seng (Nominee) Limited	100.00	(62.14)	38
Hang Seng Bank (China) Limited	100.00	(62.14)	41
Hang Seng Bank (Trustee) Limited	100.00	(62.14)	38
Hang Seng Bank Limited	62.14		38
Hang Seng Bullion Company Limited	100.00	(62.14)	38
Hang Seng Credit Limited	100.00	(62.14)	38
Hang Seng Data Services Limited	100.00	(62.14)	38
Hang Seng Finance Limited	100.00	(62.14)	38
Hang Seng Financial Information Limited	100.00	(62.14)	38
Hang Seng Indexes (Netherlands) B.V.	100.00	(62.14)	1, 42
Hang Seng Indexes Company Limited	100.00	(62.14)	38
Hang Seng Insurance Company Limited	100.00	(62.14)	38
Hang Seng Investment Management Limited	100.00	(62.14)	38
Hang Seng Investment Services Limited	100.00	(62.14)	38
Hang Seng Life Limited (In Liquidation)	100.00	(62.14)	43
Hang Seng Qianhai Fund Management Company Limited	70.00	(43.49)	12, 44
Hang Seng Real Estate Management Limited	100.00	(62.14)	38
Hang Seng Securities Limited	100.00	(62.14)	38
Hang Seng Security Management Limited	100.00	(62.14)	38
HASE Wealth Limited	100.00	(62.14)	1, 38
Haseba Investment Company Limited	100.00	(62.14)	38
HFC Bank Limited (In Liquidation)	100.00		45
High Time Investments Limited	100.00	(62.14)	38
HLF	100.00	(99.99)	35
Honey Blue Enterprises Limited	100.00		1, 46
Honey Green Enterprises Ltd.	100.00		47
Honey Grey Enterprises Limited	100.00		1, 46
Honey Silver Enterprises Limited	100.00		1, 46
Household International Europe Limited (In Liquidation)	100.00		45
Household Pooling Corporation	100.00		48
Housing (USA) LLP	N/A		0, 1, 27
HSBC (BGF) Investments Limited	100.00		18
HSBC (General Partner) Limited	100.00		2, 79
HSBC (Guernsey) GP PCC Limited	100.00		22
HSBC (Kuala Lumpur) Nominees Sdn Bhd	100.00		49
HSBC (Malaysia) Trustee Berhad	100.00		49
HSBC (Singapore) Nominees Pte Ltd	100.00		20
HSBC Agency (India) Private Limited	100.00		50
HSBC Alternative Investments Limited	100.00		18
HSBC Amanah Malaysia Berhad	100.00		49
HSBC Americas Corporation (Delaware)	100.00		15
HSBC Argentina Holdings S.A.	100.00		51
HSBC Asia Holdings B.V.	100.00		18
HSBC Asia Holdings Limited	100.00		2, 46
HSBC Asia Pacific Holdings (UK) Limited	100.00		18
HSBC Asset Finance (UK) Limited	100.00		18
HSBC Asset Finance M.O.G. Holdings (UK) Limited	100.00		18
HSBC Asset Management (Fund Services UK) Limited	100.00		1, 18
HSBC Asset Management (India) Private Limited	100.00		52
HSBC Asset Management (Japan) Limited	100.00		53
HSBC Assurances Vie (France)	100.00	(99.99)	54
HSBC Australia Holdings Pty Limited	100.00		55
HSBC BANK (CHILE)	100.00	(99.99)	56
HSBC Bank (China) Company Limited	100.00		12, 57

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
HSBC Bank (General Partner) Limited	100.00		79
HSBC Bank (Mauritius) Limited	100.00		58
HSBC Bank (RR) (Limited Liability Company)	N/A		0, 13, 59
HSBC Bank (Singapore) Limited	100.00		20
HSBC Bank (Taiwan) Limited	100.00		60
HSBC Bank (Uruguay) S.A.	100.00		61
HSBC Bank (Vietnam) Ltd.	100.00		62
HSBC Bank A.S.	100.00	(99.99)	63
HSBC Bank Argentina S.A.	99.99		51
HSBC Bank Armenia cjsc	100.00		64
HSBC Bank Australia Limited	100.00		55
HSBC Bank Bermuda Limited	100.00		23
HSBC Bank Canada	100.00		65
HSBC Bank Capital Funding (Sterling 1) LP	N/A		0, 79
HSBC Bank Capital Funding (Sterling 2) LP	N/A		0, 79
HSBC Bank Egypt S.A.E	94.54		66
HSBC Bank Malaysia Berhad	100.00		49
HSBC Bank Malta p.l.c.	70.03		67
HSBC Bank Middle East Limited	100.00		68
HSBC Bank Middle East Limited Representative Office Morocco SARL (In Liquidation)	100.00		69
HSBC Bank Oman S.A.O.G.	51.00		70
HSBC Bank Pension Trust (UK) Limited	100.00		18
HSBC Bank plc	100.00		2, 18
HSBC Bank USA, National Association	100.00		71
HSBC Branch Nominee (UK) Limited	100.00		17
HSBC Brasil Holding S.A.	100.00		21
HSBC Broking Forex (Asia) Limited	100.00		46
HSBC Broking Futures (Asia) Limited	100.00		46
HSBC Broking Futures (Hong Kong) Limited	100.00		46
HSBC Broking Securities (Asia) Limited	100.00		46
HSBC Broking Securities (Hong Kong) Limited	100.00		46
HSBC Broking Services (Asia) Limited	100.00		46
HSBC Canadian Covered Bond (Legislative) GP Inc.	100.00		72
HSBC Canadian Covered Bond (Legislative) Guarantor Limited Partnership	N/A		0, 72
HSBC Capital (USA), Inc.	100.00		15
HSBC Capital Funding (Dollar 1) L.P.	N/A		79
HSBC Card Services Inc.	100.00		15
HSBC Casa de Bolsa, S.A. de C.V., Grupo	100.00	(99.99)	16
HSBC Cayman Limited	100.00		73
HSBC Cayman Services Limited	100.00		73
HSBC City Funding Holdings	100.00		18
HSBC Client Holdings Nominee (UK) Limited	100.00		18
HSBC Client Nominee (Jersey) Limited	100.00		74
HSBC Columbia Funding, LLC	N/A		0, 15
HSBC Continental Europe	99.99		35
HSBC Corporate Advisory (Malaysia) Sdn Bhd	100.00		49
HSBC Corporate Finance (Hong Kong) Limited	100.00		46
HSBC Corporate Secretary (UK) Limited	100.00		2, 18
HSBC Corporate Trustee Company (UK) Limited	100.00		18
HSBC Custody Nominees (Australia) Limited	100.00		55
HSBC Custody Services (Guernsey) Limited	100.00		22
HSBC Daisy Investments (Mauritius) Limited	100.00		75
HSBC Diversified Loan Fund General Partner Sarl	N/A		76
HSBC Electronic Data Processing (Guangdong) Limited	100.00		12, 77
HSBC Electronic Data Processing (Malaysia) Sdn Bhd	100.00		78
HSBC Electronic Data Processing (Philippines), Inc.	99.99		79
HSBC Electronic Data Processing India Private Limited	100.00		80

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
HSBC Electronic Data Processing Lanka (Private) Limited	100.00		81
HSBC Electronic Data Service Delivery (Egypt) S.A.E.	100.00		82
HSBC Epargne Entreprise (France)	100.00	(99.99)	54
HSBC Equipment Finance (UK) Limited	100.00		17
HSBC Equity (UK) Limited	100.00		18
HSBC Europe B.V.	100.00		18
HSBC Executor & Trustee Company (UK) Limited	100.00		17
HSBC Factoring (France)	100.00	(99.99)	35
HSBC Finance (Netherlands)	100.00		2, 18
HSBC Finance Corporation	100.00		15
HSBC Finance Limited	100.00		18
HSBC Finance Mortgages Inc.	100.00		83
HSBC Finance Transformation (UK) Limited	100.00		18
HSBC Financial Advisors Singapore Pte. Ltd.	100.00		1, 20
HSBC Financial Services (Lebanon) s.a.l.	99.65		84
HSBC Financial Services (Uruguay) S.A. (In Liquidation)	100.00		85
HSBC FinTech Services (Shanghai) Company Limited	100.00		86
HSBC Global Asset Management (Bermuda) Limited	100.00		3, 23
HSBC Global Asset Management (Canada) Limited	100.00		65
HSBC Global Asset Management (Deutschland) GmbH	100.00		87
HSBC Global Asset Management (France)	100.00	(99.99)	54
HSBC Global Asset Management (Hong Kong) Limited	100.00		46
HSBC Global Asset Management (Malta) Limited	100.00	(70.03)	88
HSBC Global Asset Management (México), S.A. de C.V., Sociedad Operadora de Fondos de Inversión, Grupo Financiero HSBC	100.00	(99.99)	16
HSBC Global Asset Management (Singapore) Limited	100.00		20
HSBC Global Asset Management (Switzerland) AG	100.00		4, 89
HSBC Global Asset Management (Taiwan) Limited	100.00		46
HSBC Global Asset Management (UK) Limited	100.00		18
HSBC Global Asset Management (USA) Inc.	100.00		91
HSBC Global Asset Management Argentina S.A. Sociedad Gerente de Fondos Comunes de Inversión	100.00		51
HSBC Global Asset Management Holdings (Bahamas) Limited	100.00		92
HSBC Global Asset Management Limited	100.00		2, 18
HSBC Global Custody Nominee (UK) Limited	100.00		18
HSBC Global Custody Proprietary Nominee (UK) Limited	100.00		1, 18
HSBC Global Services (Canada) Limited	100.00		83
HSBC Global Services (China) Holdings Limited	100.00		18
HSBC Global Services (Hong Kong) Limited	100.00		46
HSBC Global Services (UK) Limited	100.00		18
HSBC Global Services Limited	100.00		2, 18
HSBC Global Shared Services (India) Private Limited (In Liquidation)	99.99		1, 50
HSBC Group Management Services Limited	100.00		18
HSBC Group Nominees UK Limited	100.00		2, 18
HSBC Holdings B.V.	100.00		18
HSBC IM Pension Trust Limited	100.00		18

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
HSBC Infrastructure Debt GP 1 S.à r.l.	N/A		0, 93
HSBC Infrastructure Debt GP 2 S.à r.l.	N/A		0, 93
HSBC Infrastructure Limited	100.00		18
HSBC Institutional Trust Services (Asia)	100.00		46
HSBC Institutional Trust Services (Bermuda) Limited	100.00		23
HSBC Institutional Trust Services (Mauritius) Limited	100.00		94
HSBC Institutional Trust Services (Singapore) Limited	100.00		20
HSBC Insurance (Asia) Limited	100.00		95
HSBC Insurance (Asia-Pacific) Holdings Limited	100.00		46
HSBC Insurance (Bermuda) Limited	100.00		23
HSBC Insurance (Singapore) Pte. Limited	100.00		20
HSBC Insurance Agency (USA) Inc.	100.00		91
HSBC Insurance Brokerage Company Limited	100.00		1, 96
HSBC Insurance Brokers Greater China Limited	100.00		1, 46
HSBC Insurance Holdings Limited	100.00		2, 18
HSBC Insurance SAC 1 (Bermuda) Limited	100.00		23
HSBC Insurance SAC 2 (Bermuda) Limited	100.00		1, 23
HSBC Insurance Services Holdings Limited	100.00		18
HSBC International Finance Corporation (Delaware)	100.00		97
HSBC International Trustee (BVI) Limited	100.00		98
HSBC International Trustee (Holdings) Pte. Limited	100.00		20
HSBC International Trustee Limited	100.00		99
HSBC Inversiones S.A.	100.00		56
HSBC InvestDirect (India) Private Limited	100.00		52
HSBC InvestDirect Financial Services (India) Limited	99.99	(99.98)	52
HSBC InvestDirect Sales & Marketing (India) Limited	98.99	(98.98)	50
HSBC InvestDirect Securities (India) Private Limited	99.99		52
HSBC Investment and Insurance Brokerage, Philippines Inc.	99.99		100
HSBC Investment Bank Holdings B.V.	100.00		18
HSBC Investment Bank Holdings Limited	100.00		18
HSBC Investment Company Limited	100.00		2, 18
HSBC Investment Funds (Canada) Inc.	100.00		65
HSBC Investment Funds (Hong Kong) Limited	100.00		46
HSBC Investment Funds (Luxembourg) SA	100.00		101
HSBC Invoice Finance (UK) Limited	100.00		102
HSBC Issuer Services Common Depositary Nominee (UK) Limited	100.00		18
HSBC Issuer Services Depositary Nominee (UK) Limited	100.00		18
HSBC Latin America B.V.	100.00		18
HSBC Latin America Holdings (UK) Limited	100.00		2, 18
HSBC Leasing (Asia) Limited	100.00		46
HSBC Life (Bermuda) Limited	100.00		23
HSBC Life (Cornell Centre) Limited	100.00		95
HSBC Life (Edwick Centre) Limited	100.00		95
HSBC Life (International) Limited	100.00		23
HSBC Life (Property) Limited	100.00		95
HSBC Life (Tsing Yi Industrial) Limited	100.00		95
HSBC Life (UK) Limited	100.00		18
HSBC Life (Workshop) Limited	100.00		1, 95
HSBC Life Assurance (Malta) Limited	100.00	(70.03)	88
HSBC Life Insurance Company Limited	100.00		12, 57
HSBC LU Nominees Limited	100.00		18
HSBC Management (Guernsey) Limited	100.00		103
HSBC Markets (USA) Inc.	100.00		15

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
HSBC Marking Name Nominee (UK) Limited	100.00		18
HSBC Master Trust Trustee Limited	100.00		18
HSBC Mexico, S.A., Institucion de Banca Multiple, Grupo Financiero HSBC	99.99		16
HSBC Middle East Asset Co. LLC	100.00		104
HSBC Middle East Holdings B.V.	100.00		2, 68
HSBC Middle East Leasing Partnership	N/A		0, 68
HSBC Middle East Securities L.L.C	100.00		105
HSBC Mortgage Corporation (Canada)	100.00		65
HSBC Mortgage Corporation (USA)	100.00		15
HSBC Nominees (Asing) Sdn Bhd	100.00		49
HSBC Nominees (Hong Kong) Limited	100.00		46
HSBC Nominees (New Zealand) Limited	100.00		106
HSBC Nominees (Tempatan) Sdn Bhd	100.00		49
HSBC North America Holdings Inc.	100.00		3, 15
HSBC Operational Services GmbH	80.00		87
HSBC Overseas Holdings (UK) Limited	100.00		2, 18
HSBC Overseas Investments Corporation (New York)	100.00		107
HSBC Overseas Nominee (UK) Limited	100.00		18
HSBC Participaciones (Argentina) S.A.	100.00		51
HSBC PB Corporate Services 1 Limited	100.00		74
HSBC PB Services (Suisse) SA	100.00		108
HSBC Pension Trust (Ireland) DAC	100.00		109
HSBC Pensiones, S.A. (In Liquidation)	100.00		16
HSBC PI Holdings (Mauritius) Limited	100.00		94
HSBC Portfoy Yonetimi A.S.	100.00		63
HSBC Preferential LP (UK)	100.00		18
HSBC Private Bank (Luxembourg) S.A.	100.00		101
HSBC Private Bank (Suisse) SA	100.00		108
HSBC Private Bank (UK) Limited	100.00		18
HSBC Private Banking Holdings (Suisse) SA	100.00		108
HSBC Private Banking Nominee 3 (Jersey) Limited	100.00		74
HSBC Private Equity Investments (UK) Limited	100.00		18
HSBC Private Investment Counsel (Canada) Inc.	100.00		65
HSBC Private Markets Management SARL	N/A		0, 110
HSBC Private Trustee (Hong Kong) Limited	100.00		46
HSBC Professional Services (India) Private Limited	100.00		50
HSBC Property (UK) Limited	100.00		18
HSBC Property Funds (Holding) Limited	100.00		18
HSBC Provident Fund Trustee (Hong Kong) Limited	100.00		46
HSBC Qianhai Securities Limited	90.00		12, 111
HSBC Real Estate Leasing (France)	100.00	(99.99)	35
HSBC REGIO Fund General Partner S.à r.l.	100.00		1, 93
HSBC REIM (France)	100.00	(99.99)	54
HSBC Retirement Benefits Trustee (UK) Limited	100.00		1, 2, 18
HSBC Retirement Services Limited	100.00		1, 18
HSBC Saudi Arabia, Closed Joint Stock Company	66.19		112
HSBC Savings Bank (Philippines) Inc.	99.99		113
HSBC Securities (Canada) Inc.	100.00		83
HSBC Securities (Egypt) S.A.E. (In Liquidation)	100.00	(94.65)	66
HSBC Securities (Japan) Co., Ltd.	100.00		1, 53
HSBC Securities (Japan) Limited	100.00		18
HSBC Securities (Singapore) Pte Limited	100.00		20
HSBC Securities (South Africa) (Pty) Limited	100.00		114
HSBC Securities (Taiwan) Corporation Limited	100.00		60
HSBC Securities (USA) Inc.	100.00		15

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
HSBC Securities and Capital Markets (India) Private Limited	99.99		50
HSBC Securities Brokers (Asia) Limited	100.00		46
HSBC Securities Investments (Asia) Limited	100.00		46
HSBC Securities Services (Bermuda) Limited	100.00		23
HSBC Securities Services (Guernsey) Limited	100.00		22
HSBC Securities Services (Ireland) DAC	100.00		109
HSBC Securities Services (Luxembourg) S.A.	100.00		101
HSBC Securities Services Holdings (Ireland) DAC	100.00		109
HSBC Securities Services Nominees Limited	100.00		1, 46
HSBC Seguros de Retiro (Argentina) S.A.	100.00	(99.99)	51
HSBC Seguros de Vida (Argentina) S.A.	100.00	(99.99)	51
HSBC Seguros, S.A de C.V., Grupo Financiero HSBC	100.00	(99.99)	16
HSBC Service Company Germany GmbH	100.00	(99.99)	1, 87
HSBC Service Delivery (Polska) Sp. z o.o.	100.00		115
HSBC Services (France)	100.00	(99.99)	35
HSBC Services Japan Limited	100.00		92
HSBC Services USA Inc.	100.00		116
HSBC Servicios Financieros, S.A. de C.V	100.00	(99.99)	16
HSBC Servicios, S.A. DE C.V., Grupo Financiero HSBC	100.00	(99.99)	16
HSBC SFH (France)	100.00	(99.99)	4, 54
HSBC SFT (C.I.) Limited	100.00		22
HSBC Software Development (Guangdong) Limited	100.00		117
HSBC Software Development (India) Private Limited	100.00		118
HSBC Software Development (Malaysia) Sdn Bhd	100.00		78
HSBC Specialist Investments Limited	100.00		18
HSBC Technology & Services (China) Limited	100.00		57
HSBC Technology & Services (USA) Inc.	100.00		15
HSBC Titan GmbH & Co. KG	100.00	(99.99)	1, 87
HSBC Transaction Services GmbH	100.00	(99.99)	6, 87
HSBC Trinkaus & Burkhardt (International) S.A.	100.00	(99.99)	119
HSBC Trinkaus & Burkhardt Gesellschaft fur Bankbeteiligungen mbH	100.00	(99.99)	87
HSBC Trinkhaus & Burkhardt GmbH	100.00	(99.99)	87
HSBC Trinkaus Europa Immobilien-Fonds Nr. 5 GmbH	100.00	(99.99)	87
HSBC Trinkaus Family Office GmbH	100.00	(99.99)	6, 87
HSBC Trinkaus Real Estate GmbH	100.00	(99.99)	6, 87
HSBC Trust Company (Canada)	100.00		65
HSBC Trust Company (Delaware), National Association	100.00		97
HSBC Trust Company (UK) Limited	100.00		18
HSBC Trustee (C.I.) Limited	100.00		74
HSBC Trustee (Cayman) Limited	100.00		120
HSBC Trustee (Guernsey) Limited	100.00		22
HSBC Trustee (Hong Kong) Limited	100.00		46
HSBC Trustee (Singapore) Limited	100.00		20
HSBC UK Bank plc	100.00		2, 17
HSBC UK Client Nominee Limited	100.00		17
HSBC UK Covered Bonds LLP	N/A		0, 17
HSBC UK Holdings Limited	100.00		2, 18
HSBC USA Inc.	100.00		107
HSBC Ventures USA Inc.	100.00		15
HSBC Violet Investments (Mauritius) Limited	100.00		75
HSBC Wealth Client Nominee Limited	100.00		1, 17
HSBC Yatirim Menkul Degerler A.S.	100.00		63
HSI Asset Securitization Corporation	100.00		15
HSI International Limited	100.00	(62.14)	38
HSIL Investments Limited	100.00		18

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
Hubei Macheng HSBC Rural Bank Company Limited	100.00		121
Hubei Suizhou Cengdu HSBC Rural Bank Company Limited	100.00		12, 122
Hubei Tianmen HSBC Rural Bank Company Limited	100.00		123
Hunan Pingjiang HSBC Rural Bank Company Limited	100.00		12, 124
Imenson Limited	100.00	(62.14)	38
INKA Internationale Kapitalanlagegesellschaft mbH	100.00	(99.99)	87
Inmobiliaria Bisa, S.A. de C.V.	99.98		16
Inmobiliaria Grufin, S.A. de C.V.	100.00	(99.99)	16
Inmobiliaria Guatusi, S.A. de C.V.	100.00	(99.99)	16
James Capel (Nominees) Limited	100.00		18
James Capel (Taiwan) Nominees Limited	100.00		18
John Lewis Financial Services Limited	100.00		18
Keyser Ullmann Limited	100.00	(99.99)	18
L&T Investment Management Limited	100.00	(99.99)	1, 52
Lion Corporate Services Limited	100.00		46
Lion International Corporate Services Limited	100.00		1, 99
Lion International Management Limited	100.00		99
Lion Management (Hong Kong) Limited	100.00		1, 46
Lyndholme Limited	100.00		46
Marks and Spencer Financial Services plc	100.00		125
Marks and Spencer Unit Trust Management Limited	100.00		125
Maxima S.A. AFJP (In Liquidation)	99.98		51
Midcorp Limited	100.00		18
Midland Bank (Branch Nominees) Limited	100.00		17
Midland Nominees Limited	100.00		17
MIL (Cayman) Limited	100.00		73
MP Payments Group Limited	100.00		1, 18
MP Payments Operations Limited	100.00		1, 18
MP Payments UK Limited	100.00		1, 18
MW Gestion SA	100.00		51
Prudential Client HSBC GIS Nominee (UK)	100.00		18
PT Bank HSBC Indonesia	99.99	(98.93)	126
PT HSBC Sekuritas Indonesia	85.00		126
R/CLIP Corp.	100.00		15
Real Estate Collateral Management Company	100.00		15
Republic Nominees Limited	100.00		22
RLUKREF Nominees (UK) One Limited	100.00		1, 18
RLUKREF Nominees (UK) Two Limited	100.00		1, 18
S.A.P.C. - Ufipro Recouvrement	99.99		35
Saf Baiyun	100.00	(99.99)	4, 35
Saf Guangzhou	100.00	(99.99)	4, 35
SCI HSBC Assurances Immo	100.00	(99.99)	54
Serai Limited	100.00		46
Serai Technology Development (Shanghai) Limited	100.00		1, 12, 57
SFM	100.00	(99.99)	35
SFSS Nominees (Pty) Limited	100.00		114
Shandong Rongcheng HSBC Rural Bank Company Limited	100.00		12, 127
Shenzhen HSBC Development Company Ltd	100.00		1, 12, 128
Sico Limited	100.00		129
SNC Les Oliviers D'Antibes	60.00	(59.99)	11, 54
SNCB/M6 - 2008 A	100.00	(99.99)	35
SNCB/M6-2007 A	100.00	(99.99)	4, 35
SNCB/M6-2007 B	100.00	(99.99)	4, 35
Société Française et Suisse	100.00	(99.99)	35
Somers Dublin DAC	100.00	(99.99)	109
Somers Nominees (Far East) Limited	100.00		23
Sopingest	100.00	(99.99)	35
South Yorkshire Light Rail Limited	100.00		18

Subsidiaries	% of share class held by immediate parent company (or by the Group where this varies)		Footnotes
St Cross Trustees Limited	100.00		17
Sun Hung Kai Development (Lujiazui III) Limited	100.00		12, 57
Swan National Limited	100.00		18
The Hongkong and Shanghai Banking Corporation Limited	100.00		5, 46
The Venture Catalysts Limited	100.00		18
Tooley Street View Limited	100.00		2, 18
Tower Investment Management	100.00		130
Trinkaus Australien Immobilien Fonds Nr. 1 Brisbane GmbH & Co. KG	100.00	(99.99)	87
Trinkaus Australien Immobilien-Fonds Nr. 1 Treuhand-GmbH	100.00	(99.99)	6, 87
Trinkaus Europa Immobilien-Fonds Nr.3 Objekt Utrecht Verwaltungs-GmbH	100.00	(99.99)	87
Trinkaus Immobilien-Fonds Geschaeftsfuehrungs-GmbH	100.00	(99.99)	6, 87
Trinkaus Immobilien-Fonds Verwaltungs-GmbH	100.00	(99.99)	6, 87
Trinkaus Private Equity Management GmbH	100.00	(99.99)	87
Trinkaus Private Equity Verwaltungs GmbH	100.00	(99.99)	6, 87
Tropical Nominees Limited	100.00		73
Turnsonic (Nominees) Limited	100.00		17
Valeurs Mobilières Elysées	100.00	(99.99)	35
Wardley Limited	100.00		46
Wayfoong Nominees Limited	100.00		46
Westminster House, LLC	N/A		0, 15
Woodex Limited	100.00		23
Yan Nin Development Company Limited	100.00	(62.14)	38

Joint ventures

The undertakings below are joint ventures and equity accounted.

Joint ventures	% of share class held by immediate parent company (or by the Group where this varies)	Footnotes
Climate Asset Management Limited	40.00	1, 131
Global Payments Technology Mexico S.A. De C.V	50.00	16
HCM Holdings Limited (In Liquidation)	50.99	45
Pentagreen Capital Pte. Ltd	50.00	1, 132
ProServe Bermuda Limited	50.00	133
The London Silver Market Fixing Limited	N/A	0 1, 134
Vaultex UK Limited	50.00	135

Associates

The undertakings below are associates and equity accounted.

Associates	% of share class held by immediate parent company (or by the Group where this varies)	Footnotes
Bank of Communications Co., Ltd.	19.03	136
Barrowgate Limited	15.31	137
BGF Group PLC	24.61	138
Bud Financial Limited	5.36	1, 139
Canara HSBC Life Insurance Company Limited	26.00	140
Contour Pte Ltd	12.65	1, 141
Divido Financial Services Limited	5.56	1, 142
Electronic Payment Services Company (Hong Kong) Limited	38.66	46
Episode Six Limited	7.02	1, 143
EPS Company (Hong Kong) Limited	38.66	46
EURO Secured Notes Issuer	16.67	144
GZHS Research Co Ltd	20.50	145
HSBC Jintrust Fund Management Company Limited	49.00	57
Liquidity Match LLC	N/A	0, 1, 146
London Precious Metals Clearing Limited	30.00	1, 147
MENA Infrastructure Fund (GP) Ltd	33.33	145
Monese Ltd	5.39	1, 149
Quantexa Ltd	10.10	131
Services Epargne Entreprise	14.18	150
The London Gold Market Fixing Limited	25.00	134
The Saudi British Bank	31.00	152
Threadneedle Software Holdings Limited	6.56	1, 153
Trade Information Network Limited	16.67	1, 154
Trinkaus Europa Immobilien-Fonds Nr. 7 Frankfurt Mertonviertel KG	N/A	0, 87
Vizolution Limited	17.95	1, 155
We Trade Innovation Designated Activity Company	9.88	1, 156

Footnotes for Note 38

Description of Shares

0	*Where an entity is governed by voting rights, HSBC consolidates when it holds – directly or indirectly – the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power to direct relevant activities, and whether power is held as an agent or principal. HSBC's consolidation policy is described in Note 1.2(a).*
1	*Management has determined that these undertakings are excluded from consolidation in the Group accounts as these entities do not meet the definition of subsidiaries in accordance with IFRS. HSBC's consolidation policy is described in Note 1.2(a).*
2	*Directly held by HSBC Holdings plc*
3	*Preference Shares*
4	*Actions*
5	*Redeemable Preference Shares*
6	*GmbH Anteil*
7	*Limited and Unlimited Liability Shares*
8	*Liquidating Share Class*
9	*Nominal Shares*
10	*Non-Participating Voting Shares*
11	*Parts*
12	*Registered Capital Shares*
13	*Russian Limited Liability Company Shares*
14	*Stückaktien*

Registered offices

15	*c/o The Corporation Trust Company 1209 Orange Street, Wilmington, Delaware, United States of America, 19801*
16	*Paseo de la Reforma 347 Col. Cuauhtemoc, Mexico, 06500*
17	*1 Centenary Square, Birmingham, United Kingdom, B1 1HQ*
18	*8 Canada Square, London, United Kingdom, E14 5HQ*
19	*5 Donegal Square South, Northern Ireland, Belfast, United Kingdom, BT1 5JP*
20	*10 Marina Boulevard #48-01 Marina Bay Financial Centre, Singapore, 018983*
21	*1909 Avenida Presidente Juscelino Kubitschek, 19° andar, Torre Norte, São Paulo Corporate Towers, São Paulo, Brazil, 04551-903*
22	*Arnold House, St Julians Avenue, St Peter Port, Guernsey, GY1 3NF*
23	*37 Front Street, Hamilton, Bermuda, HM 11*
24	*First Floor, Xinhua Bookstore Xindong Road (SE of roundabout), Miyun District, Beijing, China*
25	*Oak House Hirzel Street, St Peter Port, Guernsey, GY1 2NP*
26	*2929 Walden Avenue, Depew, New York, United States of*
27	*Corporation Service Company 251 Little Falls Drive, Wilmington, Delaware, United States of America, 19808*
28	*Solidere - Rue Saad Zaghloul Immeuble - 170 Marfaa, P.O. Box 17 5476 Mar Michael, Beyrouth, Lebanon, 11042040*
29	*No 1, Bei Huan East Road Dazu County, Chongqing, China*
30	*No 107 Ping Du Avenue (E), Sanhe Town, Fengdu County, Chongqing, China*
31	*No. 3, 5, 7, Haitang Erzhi Road Changyuan, Rongchang, Chongqing, China, 402460*
32	*c/o Walkers Corporate Services Limited Walker House, 87 Mary Street, George Town, Grand Cayman, Cayman Islands, KY1-9005*
33	*First & Second Floor, No.3 Nanshan Road, Pulandian , Dalian, Liaoning, China*
34	*160 Mine Lake CT, Ste 200, Raleigh, North Carolina, United States Of America, 27615-6417*
35	*38 avenue Kléber, Paris, France, 75116*
36	*MMG Tower, 23 floor Ave. Paseo del Mar Urbanizacion Costa del Este, Panama*

Registered offices

37	*No. 1 1211 Yanjiang Zhong Road, Yongan, Fujian, China*
38	*83 Des Voeux Road Central, Hong Kong*
39	*No.44 Xin Ping Road Central, Encheng, Enping, Guangdong, China, 529400*
40	*Room 311, Cheng Hui No. 2, Nan Sha Street, Nan Sha District, Guangzhou, Guangdong, China*
41	*34/F, 36/F, Unit 031 of 45/F, and 46/F, Hang Seng Bank Tower, 1000 Lujiazui Ring Road, Pilot Free Trade Zone, Shanghai, China, 200120*
42	*Gustav Mahlerplein 2 1082 MA, Amsterdam, Netherlands*
43	*8/F, Prince's Building, 10 Chater Road, Central, Hong Kong*
44	*1001, T2 Office Building, Qianhai Kerry Business Center, Qianhai Avenue, Nanshan Street, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, Guangdong, China*
45	*156 Great Charles Street, Queensway, Birmingham, West Midlands, United Kingdom, B3 3HN*
46	*1 Queen's Road, Central, Hong Kong*
47	*Commerce House, Wickhams Cay 1, P.O. Box 3140, Road Town, Tortola, British Virgin Islands, VG1110*
48	*The Corporation Trust Company of Nevada 311 S. Division Street, Carson City, Nevada, United States of America, 89703*
49	*Menara IQ, Lingkaran TRX, Tun Razak Exchange, Kuala Lumpur, Malaysia, 55188*
50	*52/60 M G Road Fort, Mumbai, India, 400 001*
51	*557 Bouchard Level 20, Ciudad de Buenos Aires, Capital Federal, Argentina, C1106ABG*
52	*9-11 Floors, NESCO IT Park Building No. 3 Western Express Highway, Goregaon (East), Mumbai, India, 400063*
53	*HSBC Building 11-1, Nihonbashi 3-chome, Chuo-ku, Tokyo, Japan, 103-0027*
54	*Immeuble Cœur Défense, 110 Esplanade du Général de Gaulle, Courbevoie, France, 92400*
55	*Level 36, Tower 1, International Towers Sydney, 100 Barangaroo Avenue, Sydney, New South Wales, Australia, 2000*
56	*Isidora Goyenechea 2800. 23rd Floor, Las Condes, Santiago, Chile, 7550647*
57	*HSBC Building Shanghai ifc, 8 Century Avenue, Pudong, Shanghai, China, 200120*
58	*IconEbene, Level 5 Office 1 (West Wing), Rue de L'institut, Ebene, Mauritius*
59	*2 Paveletskaya Square Building 2, Moscow, Russian Federation, 115054*
60	*54F, 7 Xinyi Road Sec. 5, Xinyi District, Taipei, Taiwan*
61	*1266 Dr Luis Bonativa, 1266 Piso 30 (Torre IV WTC), Montevideo, Uruguay, CP 11.000*
62	*The Metropolitan, 235 Dong Khoi Street, District 1, Ho Chi Minh City, Viet Nam*
63	*Esentepe mah. Büyükdere Caddesi No.128, Istanbul, Türkiye, 34394*
64	*66 Teryan Street, Yerevan, Armenia, 0009*
65	*885 West Georgia Street, 3rd Floor, Vancouver, British Columbia, Canada, V6C 3E9*
66	*306 Corniche El Nil, Maadi, Egypt, 11728*
67	*116 Archbishop Street, Valletta, Malta*
68	*401, Level 4 Gate Precinct Building 2, Dubai International Financial Centre, P.O. Box 30444, Dubai, United Arab Emirates*
69	*Majer Consulting, Office 54/44, Building A1, Residence Ryad Anfa, Boulevard Omar El Khayam, Casa Finance City (CFC), Casablanca, Morocco*
70	*Al Khuwair Office, PO Box 1727, PC111 CPO Seeb, Muscat, Oman*
71	*1800 Tysons Boulevard Suite 50, Tysons, Virginia, United States of America, 22102*
72	*66 Wellington Street West, Suite 5300, Toronto, Ontario, Canada, M5K 1E6*

Registered offices

73	P.O. Box 1109, Strathvale House, Ground Floor, 90 North Church Street , George Town, Grand Cayman, Cayman Islands, KY1-1102
74	HSBC House Esplanade, St. Helier, Jersey, JE1 1HS
75	c/o Rogers Capital St. Louis Business Centre, Cnr Desroches & St Louis Streets, Port Louis, Mauritius
76	49 avenue J.F. Kennedy, Luxembourg, 1855
77	4-17/F, Office Tower 2 TaiKoo Hui, No. 381 Tian He Road, Tian He District, Guangzhou, Guangdong, China
78	Suite 1005, 10th Floor, Wisma Hamzah Kwong, Hing No. 1, Leboh Ampang, Kuala Lumpur, Malaysia, 50100
79	Filinvest One Building, Northgate Cyberzone, Filinvest Corporate City, Alabang, Muntinlupa City, Philippines
80	HSBC House, Plot No.8, Survey No.64 (Part), Hightec City Layout Madhapur, Hyderabad, India, 500081
81	439, Sri Jayawardenapura Mawatha Welikada, Rajagiriya, Colombo, Sri Lanka
82	Smart Village 28th Km Cairo- Alexandria Desert Road Building, Cairo, Egypt
83	16 York Street, 6th Floor, Toronto, Ontario, Canada, M5J 0E6
84	Centre Ville 1341 Building, 4th Floor, Patriarche Howayek Street (facing Beirut Souks), PO Box Riad El Solh, Lebanon, 9597
85	World Trade Center, Montevideo Avenida Luis Alberto de Herrera 1248, Torre 1, Piso 15, Oficina 1502, Montevideo, Uruguay, CP 11300
86	Room 655, Building A, No. 888, Huan Hu West Two Road, Lin Gang New Area of Shanghai (Pilot) Free Trade Zone, Shanghai, China
87	Hansaallee 3, Düsseldorf, Germany, 40549
88	80 Mill Street, Qormi, Malta, QRM 3101
89	26 Gartenstrasse, Zurich, Switzerland, 8002
90	24th Floor, 97-99, Sec.2, Tunhwa S. Road, Taipei, Taiwan
91	452 Fifth Avenue, New York, United States of America, NY10018
92	Mareva House, 4 George Street, Nassau, Bahamas
93	4 rue Peternelchen, Howald, Luxembourg, 2370
94	6th floor HSBC Centre 18, Cybercity, Ebene, Mauritius, 72201
95	18th Floor, Tower 1, HSBC Centre, 1 Sham Mong Road, Kowloon, Hong Kong
96	Unit 201 Floor 2, Building 3, No. 12, Anxiang Street, Shunyi District, Beijing, China
97	300 Delaware Avenue, Suite 1401, Wilmington, Delaware, United States of America, 19801
98	Woodbourne Hall, Road Town, Tortola, British Virgin Islands, P.O. Box 916
99	PO Box 71, Craigmuir Chambers, Road Town Tortola, British Virgin Islands
100	5/F HSBC Centre 3058 Fifth Ave West, Bonifacio Global City, Taguig City, Philippines
101	18 Boulevard de Kockelscheuer, Luxembourg, 1821
102	21 Farncombe Road Worthing, United Kingdom, BN11 2BW
103	Arnold House, St Julians Avenue, St Peter Port, Guernsey, GY1 1WA
104	345-6791, HSBC Tower, Burj Khalifa Community, Dubai, United Arab Emirates
105	Office No.16, Owned by HSBC Bank Middle East Limited, Dubai Branch, Bur Dubai, Burj Khalifa, Dubai, United Arab Emirates
106	HSBC Tower, Level 21, 188 Quay Street, Auckland, New Zealand, 1010
107	The Corporation Trust Incorporated, 2405 York Road, Suite 201, Lutherville Timonium, Maryland, United States of America, 21093
108	Quai des Bergues 9-17, Geneva, Switzerland, 1201
109	1 Grand Canal Square, Grand Canal Harbour, Dublin 2, Ireland, D02 P820

Registered offices

110	5 rue Heienhaff, Senningerberg, Luxembourg, 1736
111	Block 27 A&B, Qianhai Enterprise Dream Park No. 63 Qianwan Yi Road, Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China, 518052
112	HSBC Building 7267 Olaya - Al Murrooj, Riyadh, Saudi Arabia, 12283 - 2255
113	Unit 1 GF The Commerical Complex Madrigal Avenue, Ayala Alabang Village, Muntinlupa City, Philippines, 1780
114	1 Mutual Place, 107 Rivonia Road, Sandton, Gauteng, South Africa, 2196
115	Kapelanka 42A , Krakow, Poland, 30-347
116	C T Corporation System 820 Bear Tavern Road, West Trenton, New Jersey, United States of America, 08628
117	L22, Office Tower 2, Taikoo Hui, 381 Tianhe Road, Tianhe District, Guangzhou, Guangdong, China
118	Business Bay, Wing 2, Tower B, Survey no 103, Hissa no. 2, Airport road, Yerwada, Pune, India, 411006
119	16 Boulevard d'Avranches, Luxembourg, Luxembourg, L-1160
120	P.O. Box 309 Ugland House, Grand Cayman, Cayman Islands, KY1-1104
121	No. 56 Yu Rong Street, Macheng, China, 438300
122	No. 205 Lie Shan Road Suizhou, Hubei, China
123	Building 3, Yin Zuo Di Jing Wan Tianmen New City, Tianmen, Hubei Province, China
124	RM101, 102 & 106 Sunshine Fairview, Sunshine Garden, Pedestrian Walkway, Pingjiang, China
125	Kings Meadow Chester Business Park , Chester, United Kingdom, CH99 9FB
126	World Trade Center 1, Jalan Jenderal Sudirman Kavling 29 - 31, Jakarta, Indonesia, 12920
127	No. 198-2 Chengshan Avenue (E), Rongcheng, China, 264300
128	Room 1303-13062 Marine Center Main Tower, 59 Linhai Road, Nanshan District, Shenzhen, China
129	Woodbourne Hall, Road Town, Tortola, British Virgin Islands, P.O. Box 3162
130	25 Main St. P.O. Box 694, Grand Cayman KY1 1107, Cayman Islands, KY1 1107
131	Hill House, 1 Little New Street, London , United Kingdom, EC4A 3TR
132	60B Orchard Road #06-18, The Atrium @Orchard, Singapore, 238891
133	c/o MUFG Fund Services (Bermuda) Limited, Cedar House, 4th Floor North, 41 Cedar Avenue, Hamilton, Bermuda, HM 12
134	c/o Hackwood Secretaries Limited, One Silk Street, London, United Kingdom, EC2Y 8HQ
135	All Saints Triangle, Caledonian Road, London, United Kingdom, N19UT
136	No.188, Yin Cheng Zhong Road China (Shanghai), Pilot Free Trade Zone, Shanghai, China
137	50/F, Lee Garden One, 33 Hysan Avenue, Hong Kong
138	13-15 York Buildings, London, United Kingdom, WC2N 6JU
139	Linen Court, Floor 3, 10 East Road, London, United Kingdom, N1 6AD
140	Unit No. 208, 2nd Floor, Kanchenjunga Building 18, Barakhamba Road, New Delhi, India, 110001
141	50 Raffles Place, #32-01 Singapore Land Tower, Singapore, 048623
142	Office 7, 35-37 Ludgate Hill, London, United Kingdom, EC4M 7JN
143	100 Town Square Place, Suite 201, Jersey City, New Jersey, United States Of America, 07310
144	7th Floor, 62 Threadneedle Street, London, United Kingdom, EC2R 8HP
145	Precinct Building 4, Level 3, Dubai International Financial Centre, Dubai, United Arab Emirates, PO Box 506553

Registered offices

146	*9/F Amtel Building, 148 des Voeux Road Central, Central, Hong Kong*
147	*3 Avenue de l'Opera , Paris, France, 75001*
148	*Room 1303, 106 Feng Ze Dong Road, Nansha District, Guangzhou, Guangdong, China*
149	*Eagle House, 163 City Road, London, United Kingdom, EC1V 1NR*
150	*32 rue du Champ de Tir, Nantes, France, 44300*
151	*Ernst-Schneider-Platz 1 , Duesseldorf, Germany, 40212*
152	*Al Amir Abdulaziz Ibn Mossaad Ibn Jalawi Street, Riyadh, Saudi Arabia*
153	*2nd Floor, Regis House, 45 King William Street, London, United Kingdom, EC4R 9AN*
154	*3 More London Riverside, London, United Kingdom, SE1 2AQ*
155	*Office Block A, Bay Studios Business Park, Fabian Way, Swansea, Wales, United Kingdom, SA1 8QB*
156	*10 Earlsfort Terrace, Dublin, Ireland, DO2 T380*

Shareholder information

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This section gives important information for our shareholders, including contact information. It also includes an overview of key abbreviations and terminology used throughout the *Annual Report and Accounts*.

A glossary of terms used in the Annual Report and Accounts *can be found in the Investors section of www.hsbc.com.*

Second interim dividend for 2022

The Directors have approved a second interim dividend for 2022 of $0.23 per ordinary share. Information on the currencies in which shareholders may elect to have the cash dividend paid will be sent to shareholders on or about 24 March 2023. The interim dividend will be paid in cash. The timetable for the interim dividend is:

Announcement	**21 February 2023**
Shares quoted ex-dividend in London, Hong Kong and Bermuda and American Depositary Shares ('ADS') quoted ex-dividend in New York	**2 March 2023**
Record date – London, Hong Kong, New York, Bermuda[1]	**3 March 2023**
Mailing of *Annual Report and Accounts 2022* and/or *Strategic Report 2022*	**24 March 2023**
Final date for dividend election changes including Investor Centre electronic instructions and revocations of standing instructions for dividend elections	**13 April 2023**
Exchange rate determined for payment of dividends in sterling and Hong Kong dollars	**17 April 2023**
Payment date	**27 April 2023**

1 *Removals to and from the Overseas Branch register of shareholders in Hong Kong will not be permitted on this date.*

Interim dividends for 2023

For the financial year 2022, we achieved a dividend payout ratio within our 2022 target range of between 40% and 55% of reported earnings per ordinary share ('EPS'). As previously communicated, given our current returns trajectory, we are establishing a dividend payout ratio of 50% of reported earnings per share for 2023 and 2024, excluding material significant items (including the planned sale of our retail banking operations in France and the planned sale of our banking business in Canada). The Group intends to revert to paying quarterly dividends from the first quarter of 2023. The dividend policy has the flexibility to adjust EPS for material significant items such as goodwill or intangibles impairments and may be supplemented from time to time by buy-backs or special dividends, should the Group find itself in an excess capital position absent compelling investment opportunities to deploy that excess.

Dividends are approved in US dollars and, at the election of the shareholder, paid in cash in one of, or in a combination of, US dollars, pounds sterling and Hong Kong dollars.

Other equity instruments

Additional tier 1 capital – contingent convertible securities

HSBC continues to issue contingent convertible securities that are included in its capital base as fully CRR II-compliant additional tier 1 capital securities. For further details on these securities, please refer to Note 32 on the financial statements.

HSBC issued no new perpetual contingent convertible securities during 2022.

2022 Annual General Meeting

With the exception of the shareholder requisitioned Resolution 19, which the Board recommended that shareholders vote against, and resolution 17(b), which the Board withdrew from the agenda of the 2022 Annual General Meeting ('AGM'), all resolutions considered at the 2022 AGM held at 11:00am on 29 April 2022 at Queen Elizabeth Hall, Southbank Centre, Belvedere Road, London SE1 8XX, UK were passed on a poll.

Earnings releases and interim results

First and third quarter results for 2023 will be released on 2 May 2023 and 30 October 2023, respectively. The interim results for the six months to 30 June 2023 will be issued on 1 August 2023.

Shareholder enquiries and communications

Enquiries

Any enquiries relating to shareholdings on the share register (for example, transfers of shares, changes of name or address, lost share certificates or dividend cheques) should be sent to the Registrars at the address given below. The Registrars offer an online facility, Investor Centre, which enables shareholders to manage their shareholding electronically.

Principal Register:

Computershare Investor Services PLC
The Pavilions
Bridgwater Road
Bristol BS99 6ZZ
United Kingdom
Telephone: +44 (0) 370 702 0137
Email via website:
www.investorcentre.co.uk/contactus

Investor Centre:
www.investorcentre.co.uk

Hong Kong Overseas Branch Register:

Computershare Hong Kong Investor
Services Limited
Rooms 1712-1716, 17th Floor
Hopewell Centre
183 Queen's Road East
Hong Kong
Telephone: +852 2862 8555
Email: hsbc.ecom@computershare.com.hk

Investor Centre:
www.investorcentre.com/hk

Bermuda Overseas Branch Register:

Investor Relations Team
HSBC Bank Bermuda Limited
37 Front Street
Hamilton HM 11
Bermuda
Telephone: +1 441 299 6737
Email: hbbm.shareholder.services@hsbc.bm

Investor Centre:
www.investorcentre.com/bm

Any enquiries relating to ADSs should be sent to the depositary:

The Bank of New York Mellon
Shareowner Services
P.O. Box 43006
Providence RI 02940-3078
USA
Telephone (US): +1 877 283 5786
Telephone (International): +1 201 680 6825
Email: shrrelations@cpushareownerservices.com
Website: www.mybnymdr.com

If you have elected to receive general shareholder communications directly from HSBC Holdings, it is important to remember that your main contact for all matters relating to your investment remains the registered shareholder, or custodian or broker, who administers the investment on your behalf. Therefore, any changes or queries relating to your personal details and holding (including any administration of it) must continue to be directed to your existing contact at your investment manager or custodian or broker. HSBC Holdings cannot guarantee dealing with matters directed to it in error.

Shareholders who wish to receive a hard copy of the *Annual Report and Accounts 2022* should contact HSBC's Registrars. Please visit www.hsbc.com/investors/investor-contacts for further information. You can also download an online version of the report from www.hsbc.com.

Electronic communications

Shareholders may at any time choose to receive corporate communications in printed form or to receive notifications of their availability on HSBC's website. To receive notifications of the availability of a corporate communication on HSBC's website by email, or revoke or amend an instruction to receive such notifications by email, go to www.hsbc.com/investors/shareholder-information/manage-your-shareholding. If you provide an email address to receive electronic communications from HSBC, we will also send notifications of your dividend entitlements by email. If you received a notification of the availability of this document on HSBC's website and would like to receive a printed copy, or if you would like to receive future corporate communications in printed form, please write or send an email (quoting your shareholder reference number) to the appropriate Registrars at the address given above. Printed copies will be provided without charge.

Chinese translation

A Chinese translation of the *Annual Report and Accounts 2022* will be available upon request after 24 March 2023 from the Registrars:

Computershare Hong Kong Investor Services Limited
Rooms 1712-1716, 17th Floor
Hopewell Centre
183 Queen's Road East
Hong Kong

Computershare Investor Services PLC
The Pavilions
Bridgwater Road
Bristol BS99 6ZZ
United Kingdom

Please also contact the Registrars if you wish to receive Chinese translations of future documents, or if you have received a Chinese translation of this document and do not wish to receive them in future.

《*2022* 年報及賬目》備有中譯本，各界人士可於2023年3月24日之後，向上列股份登記處索閱。

閣下如欲於日後收取相關文件的中譯本，或已收到本文件的中譯本但不希望繼續收取有關譯本，均請聯絡股份登記處。

Stock symbols

HSBC Holdings ordinary shares trade under the following stock symbols:

London Stock Exchange	HSBA*	New York Stock Exchange (ADS)	HSBC
Hong Kong Stock Exchange	5	Bermuda Stock Exchange	HSBC.BH

**HSBC's Primary market*

Investor relations

Enquiries relating to HSBC's strategy or operations may be directed to:

Richard O'Connor, Global Head of Investor Relations
HSBC Holdings plc
8 Canada Square
London E14 5HQ
United Kingdom
Telephone: +44 (0) 20 7991 6590
Email: investorrelations@hsbc.com

Mark Phin, Head of Investor Relations, Asia-Pacific
The Hongkong and Shanghai Banking
Corporation Limited
1 Queen's Road Central
Hong Kong
Telephone: 852 2822 4908
Email: investorrelations@hsbc.com.hk

Where more information about HSBC is available

The *Annual Report and Accounts 2022* and other information on HSBC may be downloaded from HSBC's website: www.hsbc.com.

Reports, statements and information that HSBC Holdings files with the Securities and Exchange Commission are available at www.sec.gov. Investors can also request hard copies of these documents upon payment of a duplicating fee by writing to the SEC at the Office of Investor Education and Advocacy, 100 F Street N.E., Washington, DC 20549-0213 or by emailing PublicInfo@sec.gov. Investors should call the Commission at (1) 202 551 8090 if they require further assistance. Investors may also obtain the reports and other information that HSBC Holdings files at www.nyse.com (telephone number (1) 212 656 3000).

HM Treasury has transposed the requirements set out under CRD IV and issued the Capital Requirements Country-by-Country Reporting Regulations 2013. The legislation requires HSBC Holdings to publish additional information in respect of the year ended 31 December 2022 by 31 December 2023. This information will be available on HSBC's website: www.hsbc.com/tax.

Taxation of shares and dividends

Taxation – UK residents

The following is a summary, under current law and the current published practice of HM Revenue and Customs ('HMRC'), of certain UK tax considerations that are likely to be material to the ownership and disposition of HSBC Holdings ordinary shares. The summary does not purport to be a comprehensive description of all the tax considerations that may be relevant to a holder of shares. In particular, the summary deals with shareholders who are resident solely in the UK for UK tax purposes and only with holders who hold the shares as investments and who are the beneficial owners of the shares, and does not address the tax treatment of certain classes of holders such as dealers in securities. Holders and prospective purchasers should consult their own advisers regarding the tax consequences of an investment in shares in light of their particular circumstances, including the effect of any national, state or local laws.

Taxation of dividends

Currently, no tax is withheld from dividends paid by HSBC Holdings.

UK resident individuals

UK resident individuals are generally entitled to a tax-free annual allowance in respect of dividends received. The amount of the allowance for the tax year beginning 6 April 2022 is £2,000. To the extent that dividend income received by an individual in the relevant tax year does not exceed the allowance, a nil tax rate will apply. Dividend income in excess of this allowance will be taxed at 8.75% for basic rate taxpayers, 33.75% for higher rate taxpayers and 39.35% for additional rate taxpayers.

UK resident companies

Shareholders that are within the charge to UK corporation tax should generally be entitled to an exemption from UK corporation tax on any dividends received from HSBC Holdings. However, the exemptions are not comprehensive and are subject to anti-avoidance rules.

If the conditions for exemption are not met or cease to be satisfied, or a shareholder within the charge to UK corporation tax elects for an otherwise exempt dividend to be taxable, the shareholder will be subject to UK corporation tax on dividends received from HSBC Holdings at the rate of corporation tax applicable to that shareholder.

Taxation of capital gains

The computation of the capital gains tax liability arising on disposals of shares in HSBC Holdings by shareholders subject to UK tax on capital gains can be complex, partly depending on whether, for example, the shares were purchased since April 1991, acquired in 1991 in exchange for shares in The Hongkong and Shanghai Banking Corporation Limited, or acquired subsequent to 1991 in exchange for shares in other companies.

For capital gains tax purposes, the acquisition cost for ordinary shares is adjusted to take account of subsequent rights and capitalisation issues. Any capital gain arising on a disposal of shares in HSBC Holdings by a UK company may also be adjusted to take account of indexation allowance if the shares were acquired before 1 January 2018, although the level of indexation allowance that is given in calculating the gain would be frozen at the value that would have been applied to a disposal of those shares in December 2017. If in doubt, shareholders are recommended to consult their professional advisers.

Stamp duty and stamp duty reserve tax

Transfers of shares by a written instrument of transfer generally will be subject to UK stamp duty at the rate of 0.5% of the consideration paid for the transfer (rounded up to the next £5), and such stamp duty is generally payable by the transferee. An agreement to transfer shares, or any interest therein, normally will give rise to a charge to stamp duty reserve tax at the rate of 0.5% of the consideration. However, provided an instrument of transfer of the shares is executed pursuant to the agreement and duly stamped before the date on which the stamp duty reserve tax becomes payable, under the current published practice of HMRC it will not be necessary to pay the stamp duty reserve tax, nor to apply for such tax to be cancelled. Stamp duty reserve tax is generally payable by the transferee.

Paperless transfers of shares within CREST, the UK's paperless share transfer system, are liable to stamp duty reserve tax at the rate of 0.5% of the consideration. In CREST transactions, the tax is calculated and payment made automatically. Deposits of shares into CREST generally will not be subject to stamp duty reserve tax, unless the transfer into CREST is itself for consideration. Following the case HSBC pursued before the European Court of Justice (Case C-569/07 HSBC Holdings plc and Vidacos Nominees Ltd v The Commissioners for HM Revenue and Customs) and a subsequent case in relation to depositary receipts, HMRC accepted that the charge to stamp duty reserve tax at 1.5% on the issue of shares (and transfers integral to capital raising) to a depositary receipt issuer or a clearance service was incompatible with European Union law, and would not be imposed.

Following the UK's departure from the European Union and the expiry of the transition period, the 1.5% stamp duty reserve tax charge on issues of shares to overseas clearance services and depositary receipt issuers is still disapplied, but no assurance can be given that legislation will not be amended in the future to reintroduce the charge.

Taxation – US residents

The following is a summary, under current law, of the principal UK tax and US federal income tax considerations that are likely to be material to the ownership and disposition of shares or American Depositary Shares ('ADSs') by a holder that is a US holder, as defined below, and who is not resident in the UK for UK tax purposes.

The summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a holder of shares or ADSs. In particular, the summary deals only with US holders that hold shares or ADSs as capital assets, and does not address the tax treatment of holders that are subject to special tax rules. These include banks, tax-exempt entities, insurance companies, dealers in securities or currencies, persons that hold shares or ADSs as part of an integrated investment (including a 'straddle' or 'hedge') comprised of a share or ADS and one or more other positions, and persons that own directly or indirectly 10% or more (by vote or value) of the stock of HSBC Holdings. This discussion is based on laws, treaties, judicial decisions and regulatory interpretations in effect on the date hereof, all of which are subject to change.

For the purposes of this discussion, a 'US holder' is a beneficial holder that is a citizen or resident of the United States, a US domestic corporation or otherwise is subject to US federal income taxes on a net income basis in respect thereof.

Holders and prospective purchasers should consult their own advisers regarding the tax consequences of an investment in shares or ADSs in light of their particular circumstances, including the effect of any national, state or local laws.

Any US federal tax advice included in the *Annual Report and Accounts 2022* is for informational purposes only. It was not intended or written to be used, and cannot be used, for the purpose of avoiding US federal tax penalties.

Taxation of dividends

Currently, no tax is withheld from dividends paid by HSBC Holdings. For US tax purposes, a US holder must include cash dividends paid on the shares or ADSs in ordinary income on the date that such holder or the ADS depositary receives them, translating dividends paid in UK pounds sterling into US dollars using the exchange rate in effect on the date of receipt. A US holder that elects to receive shares in lieu of a cash dividend must include in ordinary income the fair market value of such shares on the dividend payment date, and the tax basis of those shares will equal such fair market value.

Subject to certain exceptions for positions that are held for less than 61 days, and subject to a foreign corporation being considered a 'qualified foreign corporation' (which includes not being classified for US federal income tax purposes as a passive foreign investment company), certain dividends ('qualified dividends') received by an individual US holder generally will be subject to US taxation at preferential rates.

Based on the company's audited financial statements and relevant market and shareholder data, HSBC Holdings does not believe that it was a passive investment company for its 2022 taxable year and does not anticipate becoming a passive foreign investment company in 2023 or the foreseeable future. Accordingly, dividends paid on the shares or ADSs generally should be treated as qualified dividends.

Taxation of capital gains

Gains realised by a US holder on the sale or other disposition of shares or ADSs normally will not be subject to UK taxation unless at the time of the sale or other disposition the holder carries on a trade, profession or vocation in the UK through a branch or agency or permanent establishment and the shares or ADSs are or have been used, held or acquired for the purposes of such trade, profession, vocation, branch or agency or permanent establishment. Such gains will be included in income for US tax purposes, and will be long-term capital gains if the shares or ADSs were held for more than one year. A long-term capital gain realised by an individual US holder generally will be subject to US tax at preferential rates.

Inheritance tax

Shares or ADSs held by an individual whose domicile is determined to be the US for the purposes of the United States–United Kingdom Double Taxation Convention relating to estate and gift taxes (the 'Estate Tax Treaty') and who is not for such purposes a national of the UK will not, provided any US federal estate or gift tax chargeable has been paid, be subject to UK inheritance tax on the individual's death or on a lifetime transfer of shares or ADSs except in certain cases where the shares or ADSs (i) are comprised in a settlement (unless, at the time of the settlement, the settlor was domiciled in the US and was not a national of the UK), (ii) are part of the business property of a UK permanent establishment of an enterprise, or (iii) pertain to a UK fixed base of an individual used for the performance of independent personal services. In such cases, the Estate Tax Treaty generally provides a credit against US federal tax liability for the amount of any tax paid in the UK in a case where the shares or ADSs are subject to both UK inheritance tax and to US federal estate or gift tax.

Stamp duty and stamp duty reserve tax – ADSs

If shares are transferred to a clearance service or American Depositary Receipt ('ADR') issuer (which will include a transfer of shares to the depositary) under the current published HMRC practice, UK stamp duty and/or stamp duty reserve tax will be payable. The stamp duty or stamp duty reserve tax is generally payable on the consideration for the transfer and is payable at the aggregate rate of 1.5%.

The amount of stamp duty reserve tax payable on such a transfer will be reduced by any stamp duty paid in connection with the same transfer.

No stamp duty will be payable on the transfer of, or agreement to transfer, an ADS, provided that the ADR and any separate instrument of transfer or written agreement to transfer remain at all times outside the UK, and provided further that any such transfer or written agreement to transfer is not executed in the UK. No stamp duty reserve tax will be payable on a transfer of, or agreement to transfer, an ADS effected by the transfer of an ADR.

US information reporting and backup withholding tax

Distributions made on shares or ADSs and proceeds from the sale of shares or ADSs that are paid within the US, or through certain financial intermediaries to US holders, are subject to US information reporting and may be subject to a US 'backup' withholding tax. General exceptions to this rule happen when the US holder: establishes that it is a corporation (other than an S corporation) or other exempt holder; or provides a correct taxpayer identification number, certifies that no loss of exemption from backup withholding has occurred and otherwise complies with the applicable requirements of the backup withholding rules. Holders that are not US taxpayers generally are not subject to US information reporting or backup withholding tax, but may be required to comply with applicable certification procedures to establish that they are not US taxpayers in order to avoid the application of such US information reporting requirements or backup withholding tax to payments received within the US or through certain financial intermediaries.

Approach to ESG reporting

The information set out in the ESG review on pages 43 to 96, taken together with other information relating to ESG issues included in this *Annual Report and Accounts 2022*, aims to provide key ESG information and data relevant to our operations for the year ended 31 December 2022. The data is compiled for the financial year 1 January to 31 December 2022 unless otherwise specified. Measurement techniques and calculations are explained next to data tables where necessary. There are no significant changes from the previous reporting period in terms of scope, boundary or measurement of our reporting of ESG matters. Where relevant, rationale is provided for any restatement of information or data that has been previously published. We have also considered our obligations under the Environmental, Social and Governance Reporting Guide contained in Appendix 27 to The Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited ('ESG Guide') and under LR9.8.6R(8) of the Financial Conduct Authority's ('FCA') Listing Rules. We will continue to develop and refine our reporting and disclosures on ESG matters in line with feedback received from our investors and other stakeholders, and in view of our obligations under the ESG Guide and the FCA's Listing Rules.

ESG Guide

We comply with the 'comply or explain' provisions in the ESG Guide, save for certain items, which we describe in more detail below:

- A1(b) on relevant laws/regulations relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste: Taking into account the nature of our business, we do not believe that there are relevant laws and regulations in these areas that have significant impacts on HSBC.
- A1.3 on total hazardous waste produced, A1.4 on total non-hazardous waste produced: Taking into account the nature of our business, we do not consider hazardous waste to be a material issue for our stakeholders. As such, we report only on total waste produced, which includes hazardous and non-hazardous waste.
- A1.6 on handling hazardous and non-hazardous waste: Taking into account the nature of our business, we do not consider this to be a material issue for our stakeholders. Notwithstanding this, we continue to focus on the reduction and recycling of all waste. Building on the success of our previous operational environmental strategy, we are identifying key opportunities where we can lessen our wider environmental impact, including waste management. For further details, please see our ESG review on page 62.
- A2.4 on sourcing water issue and water efficiency target: Taking into account the nature of our business, we do not consider this to be a material issue for our stakeholders. Notwithstanding this, we have implemented measures to further reduce water consumption through the installation of flow restrictors, auto-taps and low or zero flush sanitary fittings and continue to track our water consumption.
- A2.5 on packaging material, B6(b) on issues related to health and safety and labelling relating to products and services provided, B6.1 on percentage of total products sold or shipped subject to recalls for safety and health reasons and B6.4 in recall procedures: Taking into account the nature of our business, we do not consider these to be material issues for our stakeholders.

This is aligned with the materiality reporting principle that is set out in the ESG Guide. See 'How we decide what to measure' on page 45 for further information on how we determine what matters are material to our stakeholders.

TCFD recommendations and recommended disclosures

As noted on page 17, we have considered our 'comply or explain' obligation under the FCA's Listing Rules, and confirm that we have made disclosures consistent with the TCFD Recommendations and Recommended Disclosures in this *Annual Report and Accounts 2022* save for certain items, which we describe below:

Targets setting

Metrics and targets (c) relating to short-term targets: For financed emissions we do not plan to set 2025 targets. We set targets in line with the Net-Zero Banking Alliance ('NZBA') guidelines by setting 2030 targets. While the NZBA define 2030 as intermediate, we use different time horizons for climate risk management. We define short term as time periods up to 2025; medium term is between 2026 and 2035; and long term is between 2036 and 2050. These time periods align to the Climate Action 100+ disclosure framework. In 2022, we disclose interim 2030 targets for on-balance sheet financed emissions for eight sectors as we outline on page 18. For the shipping sector, we chose to defer setting a baseline and target until there is sufficient reliable data to support our work, allowing us to more accurately track progress towards net zero. We have chosen to defer setting targets for facilitated emissions until the PCAF standard for capital markets is published, which is expected in the first half of 2023. We aim to update our targets and baselines to include both on- and off-balance sheet activities following the publication of the industry standard for capital markets methodology by PCAF. We intend to review the financed emissions baselines and targets annually, where relevant, to help ensure that they are aligned with market practice and current climate science.

Metrics and targets (c) relating to capital deployment target: We do not currently disclose a target for capital deployment. In relation to capital deployment, since 2015, we have issued more than $2bn of our own green bonds and structured green bonds with the capital invested into a variety of green projects, including: green buildings, renewable energy and clean transportation projects. In 2022, we are internally reviewing and enhancing the green bond framework, with further refinement to be undertaken in 2023. Our continued monitoring of evolving taxonomies and practices over time could result in revisions in our reporting going forward and lead to differences year-on-year as compared with prior years. See the HSBC's Green Bond Report for further information.

Metrics and targets (c) relating to internal carbon prices: We do not currently disclose internal carbon prices due to transitional challenges such as developing the appropriate systems and processes, but we considered carbon prices as an input for our climate scenario analysis exercise. We expect to further enhance the disclosure in the medium term as more data becomes available.

Impacts on financial planning and performance

Strategy (b) relating to financial planning and performance: We have used climate scenarios to inform our organisation's business, strategy and financial planning. In 2022, we incorporated certain aspects of sustainable finance and financed emissions within our financial planning process. We do not currently fully disclose the impacts of climate-related issues on financial planning, and particularly the impact of climate-related issues on our financial performance (for example, revenue and costs) and financial position (for example, assets and liabilities), in each case due to lack of data and systems for compiling the relevant financial impact. We expect to further enhance the disclosure in the medium term as more data becomes available.

Strategy (b) related to transition plan: We do not currently disclose our transition plan. We have committed to publish our own Group-wide net zero transition plan in 2023. This plan will bring together our climate strategy, science-based targets, and how we plan to embed this into our processes, policies, governance and capabilities. It will outline, in one place, not only our commitments, targets and approach to net zero across the sectors and markets we serve, but how we are transforming our organisation to embed net zero and finance the transition.

Metrics and targets (a) relating to internal carbon prices and climate-related opportunities metrics: We do not currently disclose internal carbon price targets due to transitional challenges such as data challenges. But we considered carbon prices as an input for our climate scenario analysis exercise. In addition, we do not currently fully disclose the proportion of revenue or proportion of assets, capital deployment or other business activities aligned with climate-related opportunities, including revenue from products and services designed for a low-carbon economy, forward-looking metrics consistent with our business or strategic planning time horizons. In relation to sustainable finance revenue and assets we are disclosing certain elements. We expect the data and system limitations related to financial planning and performance, and climate-related opportunities metrics to be addressed in the medium term as more reliable data becomes available and technology solutions are implemented. We expect to further enhance the disclosure in the medium term.

Impacts of transition and physical risk

Strategy (c) relating to quantitative scenario analysis: We do not currently fully disclose the impacts of transition and physical risk quantitatively, due to transitional challenges including data limitations and evolving science and methodologies. In 2022, we have disclosed the impairment impacts for our wholesale, retail and commercial real estate portfolios in different climate scenarios. In addition, we have disclosed losses on our retail mortgage book under three scenarios and flood depths for specific markets. For our wholesale book we have disclosed potential implications on our expected credit losses for 11 sectors under three scenarios. We have also disclosed a heat map showing how we expect the risks to evolve over time.

Metrics and targets (a) relating to detailed climate-related risk exposure metrics for physical and transition risks: We do not fully disclose metrics used to assess the impact of climate-related physical (chronic) and transitions (policy and legal, technology, market) risks on retail lending, parts of wholesale lending and other financial intermediary business activities (specifically credit exposure, equity and debt holdings, or trading positions, each broken down by industry, geography, credit quality, average tenor). We disclose the exposure to six high risk wholesale sectors and the flood risk exposure and Energy Performance Certificate breakdown for the UK portfolio. We are aiming to develop the appropriate systems, data and processes to provide these disclosures in future years.

Metrics and targets (c) on targets related to physical risk: We do not currently disclose targets used to measure and manage physical risk. This is due to transitional challenges including data limitations of physical risk metrics. For retail, this is because we do not use targets to measure and manage physical risk. Instead we have developed exposure monitoring metrics and risk appetite where appropriate to measure and manage physical risk. We also considered physical risk as an input for our climate scenario analysis exercise.

We expect to further enhance the disclosure in medium term considering the data limitations related to quantitative scenario analysis, specific risk metrics and physical risk targets to be addressed, more reliable data becoming available, and technology solutions implemented.

Scope 3 emissions disclosure

Metrics and targets (b) relating to scope 3 emissions metrics: We currently disclose partial scope 3 greenhouse gas emissions including business travel, supply chain and financed emissions. In relation to financed emissions, we published on-balance sheet financed emissions for six sectors as detailed on page 18. Future disclosure on financed emissions, and related risks is reliant on our customers publicly disclosing their carbon emissions and related risks. We aim to disclose financed emissions for additional sectors in our *Annual Report and Accounts 2023* and related disclosures. Our approach to disclosure of financed emissions for additional sectors can be found at: www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre.

Other matters

Strategy (b) relating to acquisitions/divestments: We have considered the impact of climate-related issues on our businesses, strategy, and financial planning, but not specifically in relation to acquisitions/divestments. Due to transitional challenges such as process limitations, we do not disclose the climate-related impact in these areas. We will aim to further enhance our processes in relation to acquisitions/divestments in the medium term.

Strategy (b) relating to access to capital: We have considered the impact of climate-related issues on our businesses, strategy, and financial planning. Our access to capital may be impacted by reputational concerns as a result of climate action or inaction. In addition, if we are perceived to mislead stakeholders on our business activities or if we fail to achieve our stated net zero ambitions, we could face reputational damage, impacting our revenue generating ability and potentially our access to capital markets. We expect to further enhance the disclosure in the medium term as more data becomes available.

To manage these risks we have integrated climate risk into our existing risk taxonomy, and incorporated it within the risk management framework through the policies and controls for the existing risks where appropriate.

Metrics and targets (c) relating to water usage target: We have described the targets used by the organisation to manage climate-related risks and opportunities and performance against targets. However, taking into account the nature of our business, we do not consider water usage to be a material target for our business and, therefore, we have not included a target in this year's disclosure.

With respect to our obligations under LR9.8.6R(8) of the FCA's Listing Rules, as part of considering what to measure and publicly report, we perform an assessment to ascertain the appropriate level of detail to be included in the climate-related financial disclosures that are set out in our *Annual Report and Accounts*. Our assessment takes into account factors such as the level of our exposure to climate-related risks and opportunities, the scope and objectives of our climate-related strategy, transitional challenges, and the nature, size and complexity of our business. See 'How we decide what to measure' on page 45 for further information.

Cautionary statement regarding forward-looking statements

The *Annual Report and Accounts 2022* contains certain forward-looking statements with respect to HSBC's financial condition; results of operations and business, including the strategic priorities; financial, investment and capital targets; and ESG targets, commitments and ambitions described herein.

Statements that are not historical facts, including statements about HSBC's beliefs and expectations, are forward-looking statements. Words such as 'may', 'will', 'should', 'expects', 'targets', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', or the negative thereof, other variations thereon or similar expressions are intended to identify forward-looking statements. These statements are based on current plans, information, data, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made. HSBC makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements. Written and/or oral forward-looking statements may also be made in the periodic reports to the US Securities and Exchange Commission, summary financial statements to shareholders, proxy statements, offering circulars and prospectuses, press releases and other written materials, and in oral statements made by HSBC's Directors, officers or employees to third parties, including financial analysts. Forward-looking statements involve inherent risks and uncertainties. Readers are cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward-looking statement. These include, but are not limited to:

- changes in general economic conditions in the markets in which we operate, such as new, continuing or deepening recessions, prolonged inflationary pressures and fluctuations in employment and creditworthy customers beyond those factored into consensus forecasts (including, without limitation, as a result of the Russia-Ukraine war and, to a lesser extent, the Covid-19 pandemic); the Russia-Ukraine war and the Covid-19 pandemic and their impact on global economies and the markets where HSBC operates, which could have a material adverse effect on (among other things) our financial condition, results of operations, prospects, liquidity, capital position and credit ratings; deviations from the market and economic assumptions that form the basis for our ECL measurements (including, without limitation, as a result of the Russia-Ukraine war, inflationary pressures and the Covid-19 pandemic); potential changes in HSBC's dividend policy; changes in foreign exchange rates and interest rates, including the accounting impact resulting from financial reporting in respect of hyperinflationary economies; volatility in equity markets; lack of liquidity in wholesale funding or capital markets, which may affect our ability to meet our obligations under financing facilities or to fund new loans, investments and businesses; geopolitical tensions or diplomatic developments producing social instability or legal uncertainty, such as the Russia-Ukraine war (including the continuation and escalation thereof) and the related imposition of sanctions and trade restrictions, supply chain restrictions and disruptions, sustained increases in energy prices and key commodities, claims of human rights violations, diplomatic tensions, including between China and the US, the UK, the EU, India and other countries, and developments in Hong Kong and Taiwan, alongside other potential areas of tension, which may adversely affect HSBC by creating regulatory, reputational and market risks; the efficacy of government, customer, and HSBC's actions in managing and mitigating ESG risks, in particular climate risk, nature-related risks and human rights risks, and in supporting the global transition to net zero carbon emissions, each of which can impact HSBC both directly and indirectly through our customers and which may result in potential financial and non-financial impacts; illiquidity and downward price pressure in national real estate markets; adverse changes in central banks' policies with respect to the provision of liquidity support to financial markets; heightened market concerns over sovereign creditworthiness in over-indebted countries; adverse changes in the funding status of public or private defined benefit pensions; societal shifts in customer financing and investment needs, including consumer perception as to the continuing availability of credit; exposure to counterparty risk, including third parties using us as a conduit for illegal activities without our knowledge; the discontinuation of certain key Ibors and the development of near risk-free benchmark rates, as well as the transition of legacy Ibor contracts to near risk-free benchmark rates, which exposes HSBC to material execution risks, including in relation to the effectiveness of its Ibor remediation strategy, and increases some financial and non-financial risks; and price competition in the market segments we serve;
- changes in government policy and regulation, including the monetary, interest rate and other policies of central banks and other regulatory authorities in the principal markets in which we operate and the consequences thereof (including, without limitation, actions taken as a result of the impact of the Russia-Ukraine war on inflation and as a result of the Covid-19 pandemic); initiatives to change the size, scope of activities and interconnectedness of financial institutions in connection with the implementation of stricter regulation of financial institutions in key markets worldwide; revised capital and liquidity benchmarks, which could serve to deleverage bank balance sheets and lower returns available from the current business model and portfolio mix; changes to tax laws and tax rates applicable to HSBC, including the imposition of levies or taxes designed to change business mix and risk appetite; the practices, pricing or responsibilities of financial institutions serving their consumer markets; expropriation, nationalisation, confiscation of assets and changes in legislation relating to foreign ownership; the UK's relationship with the EU, which continues to be characterised by uncertainty and political disagreement, particularly with respect to

the regulation of financial services, despite the signing of the Trade and Cooperation Agreement between the UK and the EU; changes in UK macroeconomic and fiscal policy as a result of the change in UK government leadership, which may result in fluctuations in the value of the pound sterling; general changes in government policy that may significantly influence investor decisions; the costs, effects and outcomes of regulatory reviews, actions or litigation, including any additional compliance requirements; and the effects of competition in the markets where we operate including increased competition from non-bank financial services companies; and

- factors specific to HSBC, including our success in adequately identifying the risks we face, such as the incidence of loan losses or delinquency, and managing those risks (through account management, hedging and other techniques); our ability to achieve our financial, investment, capital and ESG targets, commitments and ambitions (including with respect to the commitments set forth in our thermal coal phase-out policy and our energy policy and our targets to reduce our on-balance sheet financed emissions in eight high-emitting sectors), which may result in our failure to achieve any of the expected benefits of our strategic priorities; model limitations or failure, including, without limitation, the impact that high inflationary pressures, rising interest rates and the consequences of the Covid-19 pandemic have had on the performance and usage of financial models, which may require us to hold additional capital, incur losses and/or use compensating controls, such as judgemental post-model adjustments, to address model limitations; changes to the judgements, estimates and assumptions we base our financial statements on; changes in our ability to meet the requirements of regulatory stress tests; a reduction in the credit ratings assigned to us or any of our subsidiaries, which could increase the cost or decrease the availability of our funding and affect our liquidity position and net interest margin; changes to the reliability and security of our data management, data privacy, information and technology infrastructure, including threats from cyber-attacks, which may impact our ability to service clients and may result in financial loss, business disruption and/or loss of customer services and data; the accuracy and effective use of data, including internal management information that may not have been independently verified, changes in insurance customer behaviour and insurance claim rates; our dependence on loan payments and dividends from subsidiaries to meet our obligations; changes in accounting standards, including the implementation of IFRS 17 'Insurance Contracts', which may have a material impact on the way we prepare our financial statements and (with respect to IFRS 17) may negatively affect the profitability of HSBC's insurance business; changes in our ability to manage third-party, fraud and reputational risks inherent in our operations; employee misconduct, which may result in regulatory sanctions and/or reputational or financial harm; changes in skill requirements, ways of working and talent shortages, which may affect our ability to recruit and retain senior management and diverse and skilled personnel; and changes in our ability to develop sustainable finance and climate-related products consistent with the evolving expectations of our regulators, and our capacity to measure the climate impact from our financing activity (including as a result of data limitations and changes in methodologies), which may affect our ability to achieve our climate ambition, our targets to reduce financed emissions in our high-emitting sectors portfolio and the commitments set forth in our thermal coal phase-out policy and our energy policy, and increase the risk of greenwashing. Effective risk management depends on, among other things, our ability through stress testing and other techniques to prepare for events that cannot be captured by the statistical models it uses; our success in addressing operational, legal and regulatory, and litigation challenges; and other risks and uncertainties we identify in 'Top and emerging risks' on pages 135 to 142.

Additional cautionary statement regarding ESG and climate-related data, metrics and forward-looking statements

The *Annual Report and Accounts 2022* contains a number of forward-looking statements (as defined above) with respect to HSBC's ESG targets, commitments, ambitions, climate-related scenarios or pathways and the methodologies we use to assess our progress in relation to these ('ESG-related forward-looking statements').

In preparing the ESG-related information contained in the *Annual Report and Accounts 2022*, HSBC has made a number of key judgements, estimations and assumptions, and the processes and issues involved are complex. We have used ESG and climate data, models and methodologies that we consider, as of the date on which they were used, to be appropriate and suitable to understand and assess climate change risk and its impact, to analyse financed emissions - and operational and supply chain emissions, to set ESG-related targets and to evaluate the classification of sustainable finance and investments. However, these data, models and methodologies are new, are rapidly evolving and are not of the same standard as those available in the context of other financial information, nor are they subject to the same or equivalent disclosure standards, historical reference points, benchmarks or globally accepted accounting principles. In particular, it is not possible to rely on historical data as a strong indicator of future trajectories, in the case of climate change and its evolution. Outputs of models, processed data and methodologies are also likely to be affected by underlying data quality, which can be hard to assess and we expect industry guidance, market practice, and regulations in this field to continue to change. In light of the highly uncertain nature of the evolution of climate change and its impact, HSBC may have to re-evaluate its progress towards its ESG ambitions, commitments and targets in the future, update the methodologies it uses or alter its approach to ESG and climate analysis and may be required to amend, update and recalculate its ESG disclosures and assessments in the future, as market practice and data quality and availability develops rapidly. The ESG-related forward-looking statements and metrics discussed in the *Annual Report and Accounts 2022* therefore carry an additional degree of inherent risk and uncertainty.

No assurance can be given by or on behalf of the Group as to the likelihood of the achievement or reasonableness of any projections, estimates, forecasts, targets, commitments, ambitions, prospects or returns contained herein. Readers are cautioned that a number of factors, both external and those specific to HSBC, could cause actual achievements, results, performance or other future events or conditions to differ, in some cases materially, from those stated, implied and/or reflected in any ESG-related forward-looking statements or metrics due to a variety of risks, uncertainties and other factors (including without limitation those referred to below):

- Climate change projection risk: this includes, for example, the evolution of climate change and its impacts, changes in the scientific assessment of climate change impacts, transition pathways and future risk exposure and limitations of climate scenario forecasts;
- Changes in the ESG regulatory landscape: this involves changes in government approach and regulatory treatment in relation to ESG disclosures and reporting requirements, and the current lack of a single standardised regulatory approach to ESG across all sectors and markets;
- Variation in reporting standards: ESG reporting standards are still developing and are not standardised or comparable across all sectors and markets, new reporting standards in relation to different ESG metrics are still emerging;
- Data availability, accuracy, verifiability and data gaps: our disclosures are limited by the availability of high quality data needed to calculate financed emissions. Where data is not available for all sectors or consistently year on year, there may be an impact to our data quality scores. Whilst we expect our data quality scores to improve over time, as companies continue to

expand their disclosures to meet growing regulatory and stakeholder expectations, there may be unexpected fluctuations within sectors year on year, and/or differences between the data quality scores between sectors. Any such changes in the availability and quality of data over time could result in revisions to reported data going forward, including on financed emissions, meaning that such data may not be reconcilable or comparable year-on year;

- Developing methodologies: the methodologies HSBC uses to assess financed emissions and set ESG-related targets may develop over time in line with market practice, regulation and/or developments in science, where applicable. Any such developments in methodologies could result in revisions to reported data going forward, including on financed emissions or the classification of sustainable finance and investments, meaning that data outputs may not be reconcilable or comparable year-on year. In addition, climate scenarios and the models that analyse them have limitations that are sensitive to key assumptions and parameters, which are themselves subject to some uncertainty, and cannot fully capture all of the potential effects of climate, policy and technology driven outcomes; and
- Risk management capabilities: governments', customers', and HSBC's actions may not be effective in supporting the global transition to net zero carbon emissions and in managing and mitigating ESG risks, including in particular climate risk, nature-related risks and human rights risks, each of which can impact HSBC both directly and indirectly through our customers, and which may result in potential financial and non-financial impacts to HBSC. In particular:
  - we may not be able to achieve our ESG targets, commitments and ambitions (including with respect to the commitments set forth in our thermal coal phase-out policy, our energy policy and our targets to reduce our on-balance sheet financed emissions in our portfolio of selected high-emitting sectors), which may result in our failure to achieve any of the expected benefits of our strategic priorities; and
  - we may not be able to develop sustainable finance and climate-related products consistent with the evolving expectations of our regulators, and our capacity to measure the climate impact from our financing activity may diminish (including as a result of data and model limitations and changes in methodologies), which may affect our ability to achieve our climate ambition, our targets to reduce our on-balance sheet financed emissions in our portfolio of selected high-emitting sectors and the commitments set forth in our thermal coal phase-out policy and energy policy, and increase the risk of greenwashing.

HSBC makes no commitment to revise or update any ESG forward-looking statements to reflect events or circumstances occurring or existing after the date of any ESG forward-looking statements. Written and/or oral ESG-related forward-looking statements may also be made in our periodic reports to the US Securities and Exchange Commission, summary financial statements to shareholders, proxy statements, offering circulars and prospectuses, press releases and other written materials, and in oral statements made by HSBC's Directors, officers or employees to third parties, including financial analysts.

Our data dictionaries and methodologies for preparing the above ESG-related metrics and third-party limited assurance reports can be found on: www.hsbc.com/who-we-are/ esg-and-responsible-business/esg-reportingcentre.

Certain defined terms

Unless the context requires otherwise, 'HSBC Holdings' means HSBC Holdings plc and 'HSBC', the 'Group', 'we', 'us' and 'our' refer to HSBC Holdings together with its subsidiaries. Within this document the Hong Kong Special Administrative Region of the People's Republic of China is referred to as 'Hong Kong'.

When used in the terms 'shareholders' equity' and 'total shareholders' equity', 'shareholders' means holders of HSBC Holdings ordinary shares and those preference shares and capital securities issued by HSBC Holdings classified as equity. The abbreviations '$m', '$bn' and '$tn' represent millions, billions (thousands of millions) and trillions of US dollars, respectively.

Abbreviations

Currencies

£	British pound sterling
CA$	Canadian dollar
€	Euro
HK$	Hong Kong dollar
MXN	Mexican peso
RMB	Chinese renminbi
SGD	Singapore dollar
$	United States dollar

A

ABS[1]	Asset-backed security
ADR	American Depositary Receipt
ADS	American Depositary Share
AGM	Annual General Meeting
AI	Artificial intelligence
AIEA	Average interest-earning assets
ALCO	Asset and Liability Management Committee
AML	Anti-money laundering
AML DPA	Five-year deferred prosecution agreement with the US Department of Justice, entered into in December 2012
AT1	Additional tier 1

B

Basel Committee	Basel Committee on Banking Supervision
Basel II[1]	2006 Basel Capital Accord
Basel III[1]	Basel Committee's reforms to strengthen global capital and liquidity rules
Basel 3.1	Outstanding measures to be implemented from the Basel III reforms
BGF	Business Growth Fund, an investment firm that provides growth capital for small and mid-sized businesses in the UK and Ireland
BoCom	Bank of Communications Co., Limited, one of China's largest banks
BoE	Bank of England
Bps[1]	Basis points. One basis point is equal to one-hundredth of a percentage point
BVI	British Virgin Islands

C

CAPM	Capital asset pricing model
CDS[1]	Credit default swap
CEA	Commodity Exchange Act (US)
CET1[1]	Common equity tier 1
CGUs	Cash-generating units
CMB	Commercial Banking, a global business
CMC	Capital maintenance charge
CODM	Chief Operating Decision Maker
COSO	2013 Committee of Sponsoring Organizations of the Treadway Commission (US)
CP[1]	Commercial paper
CRD IV[1]	Capital Requirements Regulation and Directive
CRR[1]	Customer risk rating
CRR II[1]	Revised Capital Requirements Regulation and Directive, as implemented
CSA	Credit support annex
CSM	Contractual service margin
CVA[1]	Credit valuation adjustment

D

Deferred Shares	Awards of deferred shares define the number of HSBC Holdings ordinary shares to which the employee will become entitled, generally between one and seven years from the date of the award, and normally subject to the individual remaining in employment
DPD	Days past due
DPF	Discretionary participation feature of insurance and investment contracts
DVA[1]	Debit valuation adjustment

E

EAD[1]	Exposure at default
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
ECL	Expected credit losses. In the income statement, ECL is recorded as a change in expected credit losses and other credit impairment charges. In the balance sheet, ECL is recorded as an allowance for financial instruments to which only the impairment requirements in IFRS 9 are applied
EEA	European Economic Area
Eonia	Euro Overnight Index Average
EPC	Energy performance certificate
EPS	Earnings per ordinary share
ESG	Environmental, social and governance
EU	European Union
Euribor	Euro interbank offered rate
EVE	Economic value of equity

F

FAST-Infra	Finance to Accelerate the Sustainable Transition-Infrastructure
FCA	Financial Conduct Authority (UK)
FFVA	Funding fair value adjustment estimation methodology on derivative contracts
FPA	Fixed pay allowance
FRB	Federal Reserve Board (US)
FRC	Financial Reporting Council
FSCS	Financial Services Compensation Scheme
FTE	Full-time equivalent staff
FTSE	Financial Times Stock Exchange index
FVOCI[1]	Fair value through other comprehensive income
FX	Foreign exchange

G

GAAP	Generally accepted accounting principles
GAC	Group Audit Committee
GBM	Global Banking and Markets, a global business
GDP	Gross domestic product
GEC	Group Executive Committee
GMP	Guaranteed minimum pension
GPS	Global Payments Solutions, the business formerly known as Global Liquidity and Cash Management
GPSP	Group Performance Share Plan
GRC	Group Risk Committee
Group	HSBC Holdings together with its subsidiary undertakings
GTRF	Global Trade and Receivables Finance

H

Hang Seng Bank	Hang Seng Bank Limited, one of Hong Kong's largest banks
HKEx	The Stock Exchange of Hong Kong Limited
HKMA	Hong Kong Monetary Authority
HMRC	HM Revenue and Customs
HNAH	HSBC North America Holdings Inc.
Holdings ALCO	HSBC Holdings Asset and Liability Management Committee
Hong Kong	Hong Kong Special Administrative Region of the People's Republic of China
HQLA	High-quality liquid assets
HSBC	HSBC Holdings together with its subsidiary undertakings
HSBC Bank plc	HSBC Bank plc, also known as the non-ring-fenced bank
HSBC Bank Middle East	HSBC Bank Middle East Limited
HSBC Bank USA	HSBC Bank USA, N.A., HSBC's retail bank in the US
HSBC Canada	The sub-group, HSBC Bank Canada, HSBC Trust Company Canada, HSBC Mortgage Corporation Canada and HSBC Securities Canada, consolidated for liquidity purposes
HSBC Continental Europe	HSBC Continental Europe
HSBC Finance	HSBC Finance Corporation, the US consumer finance company (formerly Household International, Inc.)
HSBC Holdings	HSBC Holdings plc, the parent company of HSBC
HSBC Private Bank (Suisse)	HSBC Private Bank (Suisse) SA, HSBC's private bank in Switzerland
HSBC UK	HSBC UK Bank plc, also known as the ring-fenced bank

HSBC USA	The sub-group, HSBC USA Inc (the holding company of HSBC Bank USA) and HSBC Bank USA, consolidated for liquidity purposes
HSI	HSBC Securities (USA) Inc.
HSSL	HSBC Securities Services (Luxembourg)
HTIE	HSBC International Trust Services (Ireland) Limited
I	
IAS	International Accounting Standards
IASB	International Accounting Standards Board
Ibor	Interbank offered rate
ICAAP	Internal capital adequacy assessment process
ICMA	International Capital Market Association
IEA	International Energy Agency
IFRSs	International Financial Reporting Standards
ILAAP	Internal liquidity adequacy assessment process
IMA	Internal model approach
IMM	Internal model method
IRB[1]	Internal ratings-based
ISDA	International Swaps and Derivatives Association
J	
JV	Joint venture
K	
KMP	Key Management Personnel
L	
LCR	Liquidity coverage ratio
LGBTQ+	Lesbian, gay, bisexual, transgender and queer. The plus sign denotes other non-mainstream groups on the spectrums of sexual orientation and gender identity
LGD[1]	Loss given default
Libor	London interbank offered rate
Long term	For our strategic goals, we define long term as five to six years, commencing 1 January 2020
LTI	Long-term incentive
LTV[1]	Loan to value
M	
Mainland China	People's Republic of China excluding Hong Kong and Macau
Medium term	For our strategic goals, we define medium term as three to five years, commencing 1 January 2020
MENA	Middle East and North Africa
MREL	Minimum requirement for own funds and eligible liabilities
MRT[1]	Material Risk Taker
MSS	Markets and Securities Services, HSBC's capital markets and securities services businesses in Global Banking and Markets
N	
Net operating income	Net operating income before change in expected credit losses and other credit impairment charges/Loan impairment charges and other credit provisions, also referred to as revenue
NGO	Non-governmental organisation
NII	Net interest income
NIM	Net interest margin
NPS	Net promoter score
NSFR	Net stable funding ratio
NYSE	New York Stock Exchange
NZBA	Net-Zero Banking Alliance
O	
OCI	Other comprehensive income
OECD	Organisation of Economic Co-operation and Development
OTC[1]	Over-the-counter
P	
PBT	Profit before tax
PCAF	Partnership for Carbon Accounting Financials
PD[1]	Probability of default
Performance shares[1]	Awards of HSBC Holdings ordinary shares under employee share plans that are subject to corporate performance conditions
Ping An	Ping An Insurance (Group) Company of China, Ltd, the second-largest life insurer in the PRC
POCI	Purchased or originated credit-impaired financial assets
PRA	Prudential Regulation Authority (UK)
PRC	People's Republic of China
Principal plan	HSBC Bank (UK) Pension Scheme
PVIF	Present value of in-force long-term insurance business and long-term investment contracts with DPF
PwC	The member firms of the PwC network, including PricewaterhouseCoopers LLP
R	
RAS	Risk appetite statement
Repo[1]	Sale and repurchase transaction
Reverse repo	Security purchased under commitments to sell
RFR	Risk-free rate
RMM	Group Risk Management Meeting
RNIV	Risk not in VaR
RoE	Return on average ordinary shareholders' equity
RoTE	Return on average tangible equity
RWA[1]	Risk-weighted asset
S	
SABB	The Saudi British Bank
SAPS	Self-administered pension scheme
SASB	Sustainability Accounting Standards Board
SBTi	Science Based Targets initiative
SDG	United Nation's Sustainable Development Goals
SEC	Securities and Exchange Commission (US)
ServCo group	Separately incorporated group of service companies established in response to UK ring-fencing requirements
Sibor	Singapore interbank offered rate
SIC	Securities investment conduit
SICR	Significant increase in credit risk
SME	Small and medium-sized enterprise
SOFR	Secured Overnight Financing Rate
Solitaire	Solitaire Funding Limited, a special purpose entity managed by HSBC
Sonia	Sterling Overnight Index Average
SPE[1]	Special purpose entity
T	
TCFD[1]	Task Force on Climate-related Financial Disclosures
THBFIX	Thai Baht Interest Rate Fixing
TNFD	Taskforce on Nature-related Financial Disclosures
TSR[1]	Total shareholder return
U	
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
US	United States of America
V	
VaR[1]	Value at risk
VIU	Value in use
W	
WEF	World Economic Forum
WPB	Wealth and Personal Banking, a global business

1 *A full definition is included in the glossary to* the Annual Report and Accounts 2022 *which is available at www.hsbc.com/investors.*

HSBC Holdings plc

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