GROWTH

EXPANDING HORIZONS

跨境財富管理中心
Cross-boundary

BUSINESS
BANKING

The past financial year, shaped by global economic uncertainties, saw us navigate a complex array of market conditions. The conservative sentiment across markets was counterbalanced by the Bank's agile response to fluctuating interest rates and investment behaviours.

Despite the challenging operating conditions, we experienced positive growth in important areas of our business and made significant advancements in our strategy for change. By taking steps to ensure the future success of our business, we are well-positioned to capitalise on our current advantages and establish a dominant market position in emerging and sustainable areas of growth.

Wealth and Personal Banking

Wealth and Personal Banking recorded a 26% year-on-year increase in net operating income before change in ECL and other credit impairment charges to HK$23,640m. This was driven by strong growth in net interest income, which was up by 34% year-on-year. Operating profit and profit before tax increased by 40% to HK$14,193m and by 42% to HK$14,386m respectively.

Competition in deposits remained intense in 2H 2023, which accelerated the shift of funds to time deposits in the market. By strengthening customer relationships, we actively managed our deposit acquisition strategies to enhance our position in current and savings accounts, particularly with growth in customers and market share of foreign currency deposits. Our gross loans and advances to customers grew by 4% year-on-year, and we maintained our market position in mortgages, cards and personal loans. Fee income from credit card issuing benefited from the rebound in travel and consumer spending, and this also helped drive the 31% year-on-year increase in net merchant acquiring fee. To complement changing patterns in everyday spending by customers, we have revamped our credit card rewards programme (+FUN Dollars rewards), offering customers more personalised rewards, multiplier redemption offers and exclusive rewards experiences including allowing customers to repay their card statement balance with reward points. The newly introduced '+FUN Centre', a one-stop rewards platform on the Hang Seng Mobile App, makes it easier and more convenient for customers to check their +FUN Dollars and latest redemption offers, as well as earn additional rewards by completing missions anytime, anywhere.

Customer growth remains one of our key strategic priorities; we achieved a 17% year-on-year increase in our affluent segments. With the increased demand in private banking wealth management, we recorded a 116% year-on-year growth in their new accounts. We launched the first-in-the-market Prestige Banking Family+ account and pet-friendly branch that help meet the diverse needs of our customers. With this 'Family CFO' launch campaign for Prestige Banking, we won five accolades in 'Marketing Excellence Awards 2023'. We also aimed to grow our young segments. By focusing on their increasing needs in savings and budgeting, we launched Money Master as a savings planning tool with auto-track expense functions, personalised tips and progress updates via HARO WhatsApp. Supported together with diverse digital capabilities, we achieved 13% and 38% year-on-year growth on our young segment base and young new-to-bank clients. To address the evolving demand for wealth management services in the GBA, we have opened six cross-boundary Wealth Management Centres in Sheung Shui, Central, Kowloon Tong, Tsim Sha Tsui, Shenzhen and Guangzhou where clients can enjoy seamless and convenient wealth management services. In January 2024, with the opening of the second centre in Guangzhou, we now have seven cross-boundary Wealth Management Centres in key GBA cities. We introduced the Future Banking model at our new location in Festival Walk, furnished with a new Smart Teller area and with eco-friendly design including a special 'CO2 Reduction system' to reduce carbon dioxide levels in the branch, together with our 'Simple Mode' for mobile banking.

INNOVAT

FIRING UP SOLUTIONS OF TOMORROW

ION

Despite the current challenging and volatile market environment, our comprehensive product strategies, in particular the risk-off products with yield enhancements, have successfully broadened our wealth customer base with different risk appetites and achieved a healthy business mix along the high interest rates environment. This brings our active retail customers with investment transactions (excluding Securities & Government Bonds) recorded 19% year-on-year growth. In addition, the launch of revamped wealth tool ('Wealth Master') with strengthened analytical tools for portfolio rebalancing and diversification, young segment pricing for stock trading ('SimplyStock') has further improved our customer investment journey and strengthened customer stickiness on wealth business.

Hang Seng Investment Management Limited ('HSVM'), our wholly-owned subsidiary, is the leading manager of Hong Kong's listed exchange-traded funds ('ETF') in terms of assets under management ('AUM'). HSVM was honoured with the title of 'Fund House of the Year – Hong Kong SAR' at the AsianInvestor Asset Management Awards 2023. Celebrating its 30th anniversary, HSVM has seen notable growth in AUM and revenue, fortifying its position in the local asset management sector. 2023 also commemorates the first anniversary of HSVM's stewardship of the Tracker Fund of Hong Kong ('TraHK'), which has scaled new heights in its 24-year history, achieving record-high AUM and unit issuance despite challenging market conditions.

In May, HSVM's third flagship ETF was included as a southbound eligible ETF under the ETF Connect Scheme, making it the sole fund manager to have the maximum of three ETFs available in the market in this scheme. Leveraging Hong Kong's pivotal role as a super-connector between mainland China and the world, HSVM has collaborated with a leading Thai securities company 'Bualuang Securities', leading to the November launch of two Depositary Receipts ('DR') on the Stock Exchange of Thailand which invest in TraHK and Hang Seng China Enterprises Index ETF.

HSVM has also contributed to sustainability efforts by launching the 'Hang Seng Stock Connect China A Low Carbon Index ETF' in March 2023, marking the market's first A-share low-carbon themed ETF.

Our investment services and insurance businesses witnessed a 17% growth in income, marked by strong performance in structured investment products. With border reopening and continual enhancement on product suite with good customer response to our new flagship product, our insurance business achieved 174% year-on-year growth in annualised new premiums ('ANP'). Mainlander insurance contributions surpassed pre-COVID levels. Under HKFRS 17, profits from new business are capitalised in the Contractual Service Margin ('CSM') balance, which has grown by 10% to HK$21bn.

With effective wealth campaigns and a resurgence in travel, we observed a surge in uptake of travel insurance products. To provide customers with an enhanced range of general insurance products, Hang Seng and Chubb entered into an exclusive 15-year distribution agreement which was officially launched in July 2023. We continued to offer competitive customer-centric solutions and uplifted our digital capabilities to address customers' financial and health well-being needs.

We offer best-in-class digital experiences that are simple and secure for our customers, who can access our services at their pace and by their choice. We drove digital adoption through customer onboarding, reducing the account opening time to less than 30 minutes. We also introduced secured identification verification journeys for account opening and mobile authentication of branch and online transactions, allowing our customers to manage their financials safely. Innovation resides at the very heart of our organisation. We are among the first banks to participate in the e-HKD Pilot Programme and in the technical testing of using FPS to top up e-CNY wallets, continuously exploring the

expansion of cross-boundary application of e-CNY under the Memorandum of Understanding ('MoU') with China Construction Bank. Supported by all these innovations, we recorded a 16% year-on-year increase in monthly active mobile customers, and our digital retail transaction count rose by 115% year-on-year. As recognised by the industry, we have received 16 awards from The Asset, The Digital Banker, The Asian Banker, and other issuers in 2023.

Commercial Banking

Commercial Banking recorded a 12% growth in net operating income before change in ECL and other credit impairment charges to HK$10,702m. Both operating profit and profit before tax were up by 252% to HK$2,442m.

We continued to focus on quality customers acquisition, which grew 8% year-on-year, providing a sustainable source of deposits. As a result, net interest income achieved a 17% growth. However, non-interest income dropped by 12%, adversely impacted by the decline in trade finance and fee income from credit facilities due to reduced new loans.

To uplift the customer experience in account opening, we expanded the scope of Remote Account Opening services to include Hong Kong companies with mainland shareholders. Following this enhancement, our Remote Account Opening service is now available to sole proprietorships, partnerships, and limited companies established in Hong Kong with up to 10 connected parties who hold either a Hong Kong Identity Card or a Mainland Identity Card. We are also the first bank in Hong Kong to offer our mainland customers a Commercial Banking e-Sign service, enabling them to sign banking documents electronically at any time and from anywhere. In addition, we now provide one-stop multi-market onboarding services for the GBA to address customers' cross-boundary banking needs.

Our digital transformation journey continued with the aim of providing comprehensive digital solutions. We rolled out Hang Seng TradePay, an innovative digital trade finance solution that combines finance and payment into a single, fast and seamless process, allowing customers greater control over payment timing to improve their working capital position. The launch of FPS QR Mobile Collect enables merchants to collect payment instantly in a secure, reliable way via the generation of FPS QR code in the Hang Seng Business Mobile App. When a customer makes an online outward remittance, our newly introduced FX Prompt function can suggest the right payment currency, assisting the customer in managing foreign exchange costs. To encourage customers to experience the ease and convenience of digital banking, customers can now earn rewards while performing their daily digital banking activities.

Our focus in driving ESG performance continued. We arranged our first social loan to finance community development projects that support access to education and improve housing affordability. We also worked with the Hong Kong Export Credit Insurance Corporation to provide green receivables financing solution to clients, facilitating their carbon emissions reduction and growth of its sustainable supply chain network.

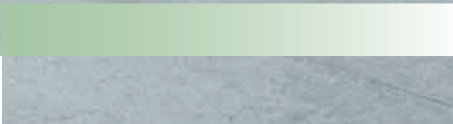
The new Lai Chi Kok Business Banking Centre is now open, focusing on providing diversified digital transformation solutions for customers to improve overall operational efficiency and to connect them with strategic partners in the technology industry.

We have been recognised as 'Hong Kong Domestic Trade Finance Bank of the Year' at the Asian Banking and Finance Awards 2023. We were also awarded 'Best Payment Solutions Provider' at Corporate Treasurer Awards 2023.

CUSTO

MER CENTRICITY

KEEPING OUR PROMISES TO YOU



Global Banking

Global Banking reported an 8% year-on-year growth in net operating income before changes in ECL and other credit impairment charges, reaching HK$2,977m. Both operating profit and profit before tax surged by 271% to HK$1,408m.

Fuelled by successful account acquisition strategies for operating cash flow deposits and benefits from the rising interest rates, net interest income grew by 7% year-on-year. Our focus on expanding our digitalised and tailor-made cash management solutions has enhanced customer experience and streamlined our processes.

However, this growth in deposit was counterbalanced by a decline in loan interest income which was affected by economic uncertainty and reduced commercial activity in the market. Nevertheless, we have continued to manage capital more efficiently, providing a broader range of balance sheet support to corporations through our bond management team, which resulted in a 116% increase in our bond portfolio balance.

We saw a solid 20% year-on-year increase in non-interest income, driven by our efforts in diversifying our revenue streams, such as offering hedging solutions to customers in a high-interest-rate environment, and strengthening our debt capital markets origination activities.

We have also taken proactive steps in providing sustainability-linked loans to assist our clients in transitioning to a low-carbon economy and to improve their environmental performance. These initiatives are part of our strategy to promote more sustainable business practices and to lessen environmental impact.

Our efforts to deliver customer-centric services were recognised with the 'Global Banking Award' at the High Flyers Awards, presented by Hong Kong Business in acknowledgment of our innovative banking solutions tailored for the ever-evolving financial market.

Global Markets

Global Markets reported a 10% decrease in net operating income before change in ECL and other credit impairment charges, amounting to HK$2,413m. Operating profit and profit before tax both fell by 17% to HK$1,677m.

Net interest income decreased by 24% to HK$1,162m, impacted by the unfavourable interest rate environment and increased funding costs.

On the other hand, non-interest income rose by 10% to HK$1,251m. We recorded revenue growth in our repo trading, equities, and rates-related structured products. Our repo business alone saw a remarkable 79% revenue growth year-on-year, expanding by onboarding new clients and enhancing our product suite. Rates trading performed well, posting a year-on-year growth of 43%. We have adeptly capitalised on market opportunities and managed risk positions amid fluctuations in the foreign exchange and interest rate markets, achieving both qualitative and quantitative growth in 2023. Furthermore, the equities and structuring business took advantage of improved client sentiment in equity structured products.

In 2023, we achieved strong growth in our wealth products, with capital protected investment sales turnover more than doubling. Through close collaboration with other business units, turnover for our equity derivative products increased significantly, with a year-on year growth of 44%, along with a 71% growth in retail bond trading volume.

AWARDS AND RECOGNITION 2023

Safest Bank in Hong Kong
GLOBAL FINANCE

No. 1 in Hong Kong for Gender Equality
EQUILEAP

Hong Kong Domestic Trade Finance Bank of the Year
ASIAN BANKING AND FINANCE

Best Payment Solutions Provider
CORPORATE TREASURER

Global Banking Award
HONG KONG BUSINESS

Best Mobile Banking Service (Hong Kong)
Best Payments Bank in Hong Kong
THE ASIAN BANKER

Best SME's Partner Award
THE HONG KONG GENERAL CHAMBER OF SMALL AND MEDIUM BUSINESS

Fund House of the Year Hong Kong
ASIANINVESTOR

Best Fintech for Digital CX – Payments
THE DIGITAL BANKER

Best Liquidity and Investments Solution
Best Payments and Collections Solution
Best ESG Solution – Hedging and Risk: FX
Best Digital Solution – Supply Chain
THE ASSET

Best Trade Finance Foreign Bank
TRADE FINANCE

2023 Gamma Award for Excellent Service Bank in GBA
SECURITIES TIMES

China International Cash Management Bank of the Year
ASIAN BANKING & FINANCE

2023 TOP Wealth Management Banking
CAILIAN PRESS

China Financial Annual Outstanding CSR Project
CHINA BANKING AND INSURANCE NEWS

Rural Revitalization Award
PEOPLE'S DAILY ONLINE

Constituent stock of FTSE4Good Developed Index (Since 2001)
FTSE RUSSELL

Constituent stock of MSCI Pacific ex Japan SRI Index (Since 2015)
MSCI

Constituent stock of Hang Seng Corporate Sustainability Index (Since 2010)
HANG SENG INDEXES

Constituent stock of Hong Kong Business Sustainability Index (Since 2015)
THE CHINESE UNIVERSITY OF HONG KONG CENTRE FOR BUSINESS SUSTAINABILITY

20 Years Plus Caring Company
HONG KONG COUNCIL OF SOCIAL SERVICE

MSCI ESG Rating: maintained an AA rating

SUSTAIN

ENVISIONING A LASTING FUTURE

ABILITY

Financial Performance

Income Analysis

Summary of financial performance

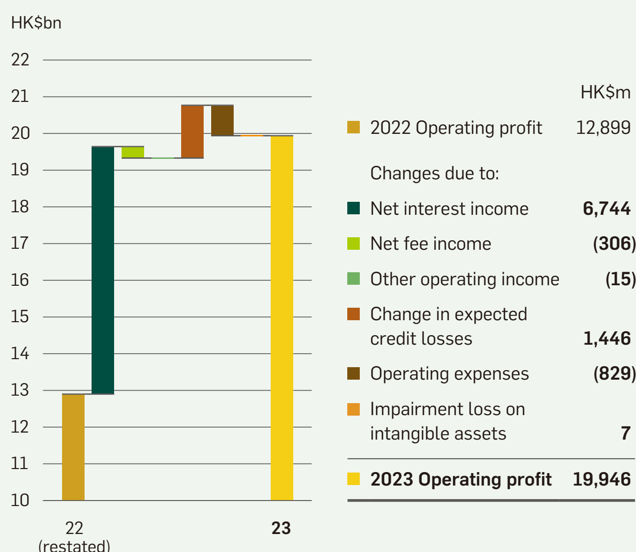
Figures in HK$m	2023	2022 (restated)
Net operating income before change in expected credit losses and other credit impairment charges	**40,822**	34,399
Operating expenses	**14,624**	13,795
Operating profit	**19,946**	12,899
Profit before tax	**20,105**	12,781
Profit attributable to shareholders	**17,848**	11,286
Earnings per share (in HK$)	**8.97**	5.53

The Group's financial performance benefited from the post pandemic economic recovery and the reopening of the Mainland-Hong Kong boundary. However, business growth was limited by market concerns about volatile economic conditions and expectations of prolonged high interest rates that continued to dampen investment sentiment and loan demand. Nevertheless, the Group seized opportunities to enhance its net interest income through proactive loan and deposit portfolio management. The Group remains vigilant and will continue to closely monitor the prevailing interest rate outlook and capture opportunities as the economy recovers, notably in cross-boundary business.

The Group adopted HKFRS 17 *'Insurance Contracts'* on 1 January 2023. The impact of the change on comparative figures previously published under HKFRS 4 *'Insurance Contracts'* is set out in the 'Additional Information' section of the press release.

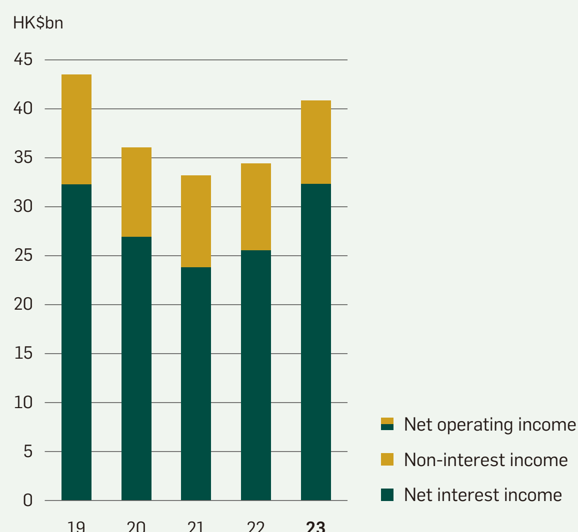
Net operating income before change in expected credit losses and other credit impairment charges was HK$40,822m, up 19%. Net interest income rose by 26% as a result of higher market interest rates, more than offsetting the decline in the loan portfolio. This rise was partly offset by a 4% decrease in non-interest income, mainly due to lower securities broking-related income reflecting reduced stock turnover volumes and higher credit card fee expenses to support card business expansion. Operating expenses increased by 6% compared with 2022, mainly due to increases in data processing and administrative services fees, coupled with technology investments to support

Operating Profit Analysis



Net Operating Income

(Before change in expected credit losses and other credit impairment charges)



Financial results of 2023 and 2022 are prepared on HKFRS 17 basis and that of 2019/2020/2021 are prepared on HKFRS 4 basis and are not comparable.

innovation and operational efficiency. The change in ECL decreased by HK$1,446m to HK$6,248m, reflecting the net release of HK$1,071m for Stage 1 and Stage 2 exposure in 2023 compared with net charges of HK$1,350m in 2022, offset by higher ECL charges for wholesale Stage 3 customers. **Operating profit** increased by 55% to HK$19,946m. **Profit before tax** rose by 57% to HK$20,105m and **profit attributable to shareholders** was up by 58% at HK$17,848m.

Net interest income increased by HK$6,744m, or 26%, to HK$32,295m, supported by the 55-basis-point improvement in the net interest margin. Average interest-earning assets declined by HK$56bn, or 4%, to HK$1,406bn due to subdued new loan demand and de-risking measures pertaining to the mainland China CRE sector, partly offset by higher average balances in financial investments and interbank placements due to the redeployment of the commercial surplus.

Net interest margin widened by 55 basis points to 2.30%, attributable mainly to the Group proactively managing its assets and liabilities under the rising interest rate environment, which resulted in a widening of deposit spreads. The net interest spread increased by 27 basis points to 1.89%.

Figures in HK$m	2023	2022 (restated)
Interest income arising from:		
– financial assets measured at amortised cost	48,879	30,650
– financial assets measured at fair value through other comprehensive income	10,560	4,132
	59,439	34,782
Interest expense arising from financial liabilities measured at amortised cost	(27,144)	(9,231)
Net interest income	32,295	25,551
Average interest-earning assets	1,406,183	1,462,548
Net interest spread	1.89%	1.62%
Net interest margin	2.30%	1.75%

Net fee income decreased by HK$306m, or 6%, to HK$4,920m, primarily due to an increase in fee expenses outweighing fee income growth. Fee expenses rose by 28%, mainly because of higher processing and interchange fees, along with higher cash dollar awards to customers to stimulate the card service income from the rebound of consumer activities. Income from securities broking-related services dropped by 11%, reflecting the adverse impact of stock market performance. Import and export fee income also decreased by 27% due mainly to subdued trade finance activities. Credit facilities fees were down by 15%, as a result of reduced new corporate lending activities. These unfavourable factors were partly offset by higher fee income from card services, account services and data license fees under other fee income.

Net income/(loss) from financial instruments measured at fair value through profit or loss showed net income of HK$11,330m, an improvement from net loss of HK$21,455m in 2022. Net income/(expense) from assets and liabilities of insurance business, including related derivatives, measured at fair value through profit or loss recorded a gain of HK$11,478m; improved from a loss of HK$21,939m in 2022; mainly reflected fair value gains on debt securities measured at fair value through profit or loss which back insurance contracts. There is an offsetting impact within the associated insurance liability accounting reported in Insurance finance income/(expenses).

Net trading income, net income/(loss) from financial instruments designated at fair value through profit or loss, and changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss together decreased by HK$632m, or 131%, to a loss of HK$148m. This was due to higher interest expenses on structured deposits and certificates of deposits issued in response to rising interest rates.

Insurance finance income/(expenses) recorded an expense of HK$10,805m in 2023 (an income of HK$22,720m in 2022), offsetting gains/(losses) reported on underlying assets held to support insurance contract liabilities.

Insurance service results showed an increase of HK$389m, or 23%, to HK$2,049m. This increase was propelled by new business growth in 2023, favourable experience variances, and the impact of assumption changes. The enhanced insurance service results also reflected a decrease in losses from onerous contracts, largely due to improved economic conditions in 2023.

Wealth management business income (mainly investment and insurance related income) increased by HK$615m, or 12%, to HK$5,693m, predominantly coming from the increase in life insurance related income. Investment services income marginally decreased against last year, with growth in retail investment funds and structured investment products income, more than offset by the decrease in securities broking and related services.

Figures in HK$m	2023	2022 (restated)
Investment services income[1]:		
– retail investment funds	950	903
– structured investment products	524	453
– securities broking and related services	1,258	1,411
– margin trading and others	62	65
	2,794	2,832
Life insurance:		
– net interest income	95	8
– non-interest income/(expense)	304	(6)
– investment returns on life insurance funds (including share of associate's profits/(losses), net surplus/(deficit) on property revaluation backing insurance contracts and change in expected credit losses and other credit impairment charges)	11,016	(22,379)
– insurance finance income/(expenses)	(10,805)	22,720
– insurance service results	2,049	1,660
• insurance revenue	2,913	2,766
• insurance service expense	(864)	(1,106)
	2,659	2,003
General insurance and others	240	243
	5,693	5,078

[1] Income from retail investment funds and securities broking and related services are net of fee expenses. Income from structured investment products includes income reported under net fee income on the sales of third-party structured investment products. It also includes profits generated from the selling of structured investment products in issue, reported under net income/(loss) from financial instruments measured at fair value through profit or loss.

Change in expected credit losses and other credit impairment charges decreased by HK$1,446m, or 19%, to HK$6,248m compared with 2022. The Group has remained vigilant in light of the volatile external environment, continuously monitoring exposures, particularly in the mainland China CRE sector, where recovery is still considered uncertain.

Figures in HK$m	2023	2022 (restated)
Loans and advances to banks and customers	6,304	7,669
– new allowances net of allowance releases	6,420	7,367
– recoveries of amounts previously written off	(229)	(131)
– other movements	113	433
Loan commitments and guarantees	(65)	(8)
Other financial assets	9	33
	6,248	7,694

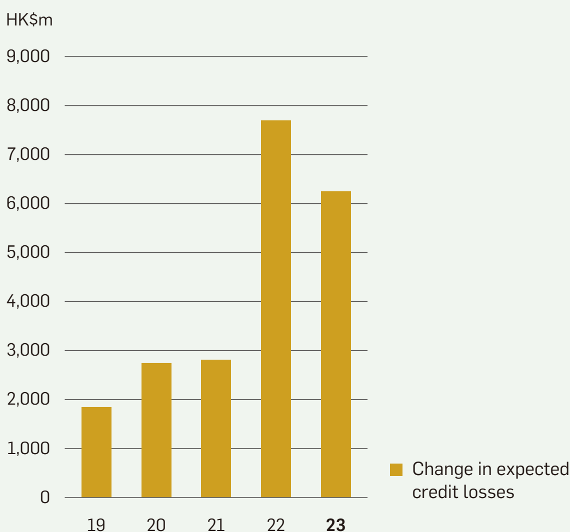
Change in ECL for Stage 1 and Stage 2 unimpaired credit exposures resulted in net releases of HK$1,071m, in contrast to net charges of HK$1,350m in 2022. This turnaround is due to a decline in loan balances stemming from subdued credit demand and higher customer repayments, along with the migration of certain exposures in mainland China CRE to Stage 3 due to portfolio deterioration.

Change in ECL for Stage 3 and purchased or originated credit-impaired exposures ('impaired credit exposures') increased by HK$975m to HK$7,319m compared with 2022, predominately related to mainland China CRE exposures.

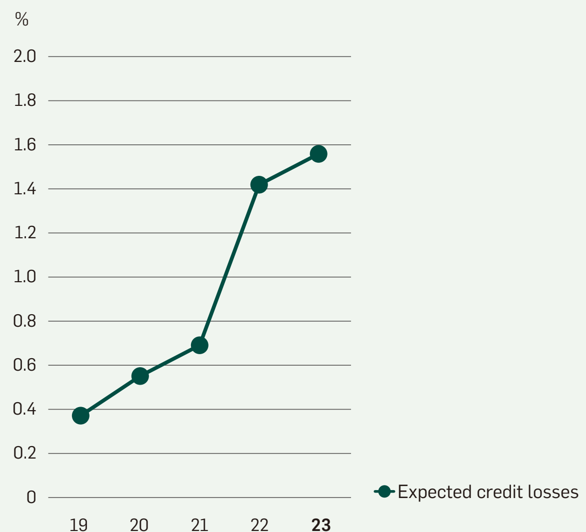
Change in ECL (Stage 1 to 3) for Wealth and Personal banking increased by HK$246m to HK$805m. Conversely, Commercial Banking and Global Banking recorded reduced change in ECL (Stages 1 to 3) by HK$1,683m to HK$5,447m.

Gross impaired loans and advances changed from HK$24.2bn as at 31 December 2022 to HK$24.7bn as at 31 December 2023. This change reflects downgrades and write-offs in certain impaired corporate loans, predominately in the mainland China CRE sector. Gross impaired loans and advances as a percentage of gross loans and advances to customers were 2.83% as of 31 December 2023, compared to 2.85% on 30 June 2023 and 2.56% at 31 December 2022.

Change in expected credit losses and other credit impairment charges



Expected credit losses as a percentage of gross loans and advances to customers



Financial results of 2023 and 2022 are prepared on HKFRS 17 basis and that of 2019/2020/2021 are prepared on HKFRS 4 basis and are not comparable.

Expected credit losses and gross impaired loans and advances as a percentage of gross loans and advances to customers are as follow:

	At 31 December 2023	At 31 December 2022
Expected credit losses as a percentage of gross loans and advances to customers	**1.56%**	1.42%
Gross impaired loans and advances as a percentage of gross loans and advances to customers	**2.83%**	2.56%

Other operating income/(loss) saw an increase of HK$396m, or 102%, to HK$783m, mainly due to higher reinsurance income and rental income.

Operating expenses increased by HK$829m, or 6%, to HK$14,624m, primarily due to a rise in general and administrative expenses driven by processing service fees, continued investment in technology to enhance the service experience for customers and our digital capabilities. Amortisation of intangible assets increased by 33%, mainly arising from the capitalised IT systems development costs to support business growth. The general increase in operating expenses is partly offset by the decrease of staff costs by 2% compared with 2022.

Full-time equivalent staff numbers by region	At 31 December 2023	At 31 December 2022
Hong Kong and others	**6,997**	7,101
Mainland China	**1,497**	1,607
	8,494	8,708

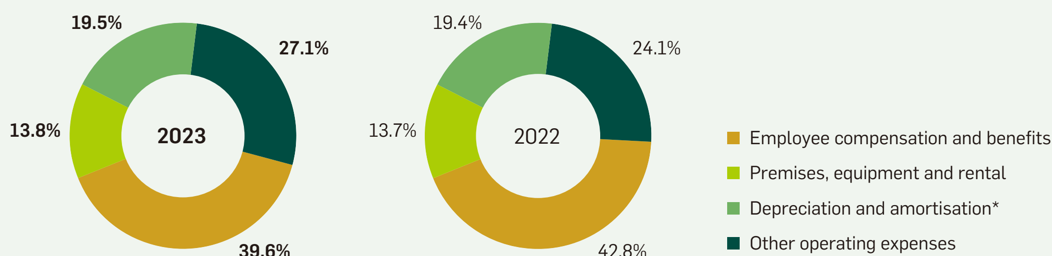
The cost efficiency ratio improved by 4.3 percentage points to 35.8%.

	2023	2022 (restated)
Cost efficiency ratio	**35.8%**	40.1%

2H 2023 compared with 1H 2023

Net operating income before change in expected credit losses and other credit impairment charges grew by HK$942m, or 5%, to HK$20,882m. This growth was driven by the 13% increase in net interest income, partly offset by the 20% drop in non-interest income. With the 4% increase in operating expenses and incremental ECL charges in 2H 2023, operating profit decreased by HK$1,770m, or 16%. Profit attributable to shareholders decreased by HK$1,806m, or 18%, when compared with 1H 2023.

Operating Expenses



* Included depreciation of right-of-use assets of HK$470m in 2023 (2022: HK$514m).

Net interest income was up HK$1,913m, or 13%, driven by a stronger net interest margin, which improved by 42 basis points to 2.51%. This improvement reflected rising market interest rates in 2H 2023. This positive outcome included the impact from a less favourable deposit mix with current and savings account deposits ('CASA') to total deposits lowering to 53.3% at 2023 year-end from 60.9% at 30 June 2023. CASA market share declined by 117 basis points from 30 June 2023 to 9.01% as at 31 December 2023, reflecting the deliberate liability management in the context of escalating market interest rates.

Non-interest income fell by HK$971m, or 20%, primarily reflecting lower net income/(loss) from financial instruments measured at fair value through profit or loss, and reduced levels of customer activity across the Group's fee-generating businesses. This included notably lower income from credit facilities fees, retail investment funds, securities broking related services, and a decrease in net credit card fee income.

Operating expenses increased by HK$312m, or 4%, driven mainly by higher general and administrative expenses, which outweighed a 4% decrease in staff costs. The Group will continue to proactively manage operating expenses to enable the continuous allocation of resources towards further optimising its digital capabilities and enhancing the customer experience.

ECL increased in 2H 2023 in response to the challenges faced by mainland China CRE developers. Total change in **ECL** increased by HK$2,400m to HK$4,324m, due to higher net charges of HK$196m for Stage 1 and 2 ECL for unimpaired credit exposures in 2H 2023, compared with the net release of HK$1,267m in 1H 2023. Additionally, there were higher charges for impaired credit exposures, which recorded net charges for both periods – HK$4,128m for 2H 2023 and HK$3,191m for 1H 2023 – reflecting the downgrade of certain corporate customers related to the mainland China CRE.

Segmental Analysis

The table below sets out the profit before tax contributed by the business segments.

Figures in HK$m	Wealth and Personal Banking	Commercial Banking	Global Banking	Global Markets	Other	Total
Year ended 31 December 2023						
Profit/(loss) before tax	**14,386**	**2,442**	**1,408**	**1,677**	**192**	**20,105**
Share of profit/(loss) before tax	**71.6%**	**12.1%**	**7.0%**	**8.3%**	**1.0%**	**100.0%**
Year ended 31 December 2022 (restated)						
Profit/(loss) before tax	10,120	694	380	2,024	(437)	12,781
Share of profit/(loss) before tax	79.2%	5.4%	3.0%	15.8%	(3.4)%	100.0%

Wealth and Personal Banking ('WPB') recorded a 26% year-on-year increase in net operating income before change in ECL and other credit impairment charges to HK$23,640m. This was driven by strong growth in net interest income, which was up by 34% year-on-year. Operating profit and profit before tax increased by 40% to HK$14,193m and by 42% to HK$14,386m respectively.

Competition in deposits remained intense in 2H 2023, which accelerated the shift of funds to time deposits in the market. By strengthening customer relationships, we actively managed our deposit acquisition strategies to enhance our position in current and savings accounts, particularly with growth in customers and market share of foreign currency deposits. Our gross loans and advances to customers grew by 4% year-on-year, and we maintained our market position in mortgages, cards and personal loans. Fee income from credit card issuing benefited from the rebound in travel and consumer spending, and this also helped drive the 31% year-on-year increase in net merchant acquiring fee. To complement changing patterns in everyday spending by customers, we have revamped our credit card rewards programme (+FUN Dollars rewards), offering customers more personalised rewards, multiplier redemption offers and exclusive rewards experiences including allowing customers to repay their card statement balance with reward points. The newly introduced '+FUN Centre', a one-stop rewards platform on the Hang Seng Mobile App, makes it easier and more convenient for customers to check their +FUN Dollars and latest redemption offers, as well as earn additional rewards by completing missions anytime, anywhere.

Customer growth remains one of our key strategic priorities; we achieved a 17% year-on-year increase in our affluent segments. With the increased demand in private banking wealth management, we recorded a 116% year-on-year growth in their new accounts. We launched the first-in-the-market Prestige Banking Family+ account and pet-friendly branch that help meet the diverse needs of our customers. With this 'Family CFO' launch campaign for Prestige Banking, we won five accolades in 'Marketing Excellence Awards 2023'. We also aimed to grow our young segments. By focusing on their increasing needs in savings and budgeting, we launched Money Master as a savings planning tool with auto-track expense functions, personalised tips and progress updates via HARO WhatsApp. Supported together with diverse digital capabilities, we achieved 13% and 38% year-on-year growth on our young segment base and young new-to-bank clients. To address the evolving demand for wealth management services in the GBA, we have opened six cross-boundary Wealth Management Centres in Sheung Shui, Central, Kowloon Tong, Tsim Sha Tsui, Shenzhen and Guangzhou where clients can enjoy seamless and convenient wealth management services. In January 2024, with the opening of the second centre in Guangzhou, we now have seven cross-boundary Wealth Management Centres in key GBA cities. We introduced the Future Banking model at our new location in Festival Walk, furnished with a new Smart Teller area and with eco-friendly design including a special 'CO2 Reduction system' to reduce carbon dioxide levels in the branch, together with our 'Simple Mode' for mobile banking.

Despite the current challenging and volatile market environment, our comprehensive product strategies, in particular the risk-off products with yield enhancements, have successfully broadened our wealth customer base with different risk appetites and achieved a healthy business mix along the high interest rates environment. This brings our active retail customers with investment transactions (excluding Securities & Government Bonds) recorded 19% year-on-year growth. In addition, the launch of revamped wealth tool ('Wealth Master') with strengthened analytical tools for portfolio rebalancing and diversification, young segment pricing for stock trading ('SimplyStock') has further improved our customer investment journey and strengthened customer stickiness on wealth business.

Hang Seng Investment Management Limited ('HSVM'), our wholly-owned subsidiary, as the leading manager of Hong Kong's listed exchange-traded funds ('ETF') in terms of assets under management ('AUM'). HSVM was honoured with the title of 'Fund House of the Year – Hong Kong SAR' at the AsianInvestor Asset Management Awards 2023. Celebrating its 30th anniversary, HSVM has seen notable growth in AUM and revenue, fortifying its position in the local asset management sector. 2023 also commemorates the first anniversary of HSVM's stewardship of the Tracker Fund of Hong Kong ('TraHK'), which has scaled new heights in its 24-year history, achieving record-high AUM and unit issuance despite challenging market conditions.

In May, HSVM's third flagship ETF was included as a southbound eligible ETF under the ETF Connect Scheme, making it the sole fund manager to have the maximum of three ETFs available in the market in this scheme. Leveraging Hong Kong's pivotal role as a super-connector between mainland China and the world, HSVM has collaborated with a leading Thai securities company 'Bualuang Securities', leading to the November launch of two Depositary Receipts ('DR') on the Stock Exchange of Thailand which invest in TraHK and Hang Seng China Enterprises Index ETF.

HSVM has also contributed to sustainability efforts by launching the 'Hang Seng Stock Connect China A Low Carbon Index ETF' in March, marking the market's first A-share low-carbon themed ETF.

Our investment services and insurance businesses witnessed a 17% growth in income, marked by strong performance in structured investment products. With border reopening and continual enhancement on product suite with good customer response to our new flagship product, our insurance business achieved 174% year-on-year growth in annualised new premiums ('ANP'). Mainlander insurance contributions surpassed pre-COVID levels. Under HKFRS 17, profits from new business are capitalised in the Contractual Service Margin ('CSM') balance, which has grown by 10% to HK$21bn.

With effective wealth campaigns and a resurgence in travel, we observed a surge in uptake of travel insurance products. To provide customers with an enhanced range of general insurance products, Hang Seng and Chubb entered into an exclusive 15-year distribution agreement which was officially launched in July 2023. We continued to offer competitive customer-centric solutions and uplifted our digital capabilities to address customers' financial and health well-being needs.

We offer best-in-class digital experiences that are simple and secure for our customers, who can access our services at their pace and by their choice. We drove digital adoption through customer onboarding, reducing the account opening time to less than 30 minutes. We also introduced secured identification verification journeys for account opening and mobile authentication of branch and online transactions, allowing our customers to manage their financials safely. Innovation resides at the very heart of our organisation. We are among the first banks to participate in the e-HKD Pilot Programme and in the technical testing of using FPS to top up e-CNY wallets, continuously exploring the expansion of cross-boundary application of e-CNY under the Memorandum of Understanding ('MoU') with China Construction Bank. Supported by all these innovations, we recorded a 16% year-on-year increase in monthly active mobile customers, and our digital retail transaction count rose by 115% year-on-year. As recognised by the industry, we have received 16 awards from The Asset, The Digital Banker, The Asian Banker, and other issuers in 2023.

Commercial Banking ('CMB') recorded a 12% growth in net operating income before change in ECL and other credit impairment charges to HK$10,702m. Both operating profit and profit before tax were up by 252% to HK$2,442m.

We continued to focus on quality customers acquisition, which grew 8% year-on-year, providing a sustainable source of deposits. As a result, net interest income achieved a 17% growth. However, non-interest income dropped by 12%, adversely impacted by the decline in trade finance and fee income from credit facilities due to reduced new loans.

To uplift the customer experience in account opening, we expanded the scope of Remote Account Opening services to include Hong Kong companies with mainland shareholders. Following this enhancement, our Remote Account Opening service is now available to sole proprietorships, partnerships, and limited companies established in Hong Kong with up to 10 connected parties who hold either a Hong Kong Identity Card or a Mainland Identity Card. We are also the first bank in Hong Kong to offer our mainland customers a Commercial Banking e-Sign service, enabling them to sign banking documents electronically at any time and from anywhere. In addition, we now provide one-stop multi-market onboarding services for the GBA to address customers' cross-boundary banking needs.

Our digital transformation journey continued with the aim of providing comprehensive digital solutions. We rolled out Hang Seng TradePay, an innovative digital trade finance solution that combines finance and payment into a single, fast and seamless process, allowing customers greater control over payment timing to improve their working capital position. The launch of FPS QR Mobile Collect enables merchants to collect payment instantly in a secure, reliable way via the generation of FPS QR code in the Hang Seng Business Mobile App. When a customer makes an online outward remittance, our newly introduced FX Prompt function can suggest the right payment currency, assisting the customer in managing foreign exchange costs. To encourage customers to experience the ease and convenience of digital banking, customers can now earn rewards while performing their daily digital banking activities.

Our focus in driving ESG performance continued. We arranged our first social loan to finance community development projects that support access to education and improve housing affordability. We also worked with the Hong Kong Export Credit Insurance Corporation to provide green receivables financing solution to clients, facilitating their carbon emissions reduction and growth of its sustainable supply chain network.

The new Lai Chi Kok Business Banking Centre is now open, focusing on providing diversified digital transformation solutions for customers to improve overall operational efficiency and to connect them with strategic partners in the technology industry.

We have been recognised as 'Hong Kong Domestic Trade Finance Bank of the Year' at the Asian Banking and Finance Awards 2023. We were also awarded 'Best Payment Solutions Provider' at Corporate Treasurer Awards 2023.

Global Banking ('GB') reported an 8% year-on-year growth in net operating income before changes in ECL and other credit impairment charges, reaching HK$2,977m. Both operating profit and profit before tax surged by 271% to HK$1,408m.

Fuelled by successful account acquisition strategies for operating cash flow deposits and benefits from the rising interest rates, net interest income grew by 7% year-on-year. Our focus on expanding our digitalised and tailor-made cash management solutions has enhanced customer experience and streamlined our processes.

However, this growth in deposit was counterbalanced by a decline in loan interest income which was affected by economic uncertainty and reduced commercial activity in the market. Nevertheless, we have continued to manage capital more efficiently, providing a broader range of balance sheet support to corporations through our bond management team, which resulted in a 116% increase in our bond portfolio balance.

We saw a solid 20% year-on-year increase in non-interest income, driven by our efforts in diversifying our revenue streams, such as offering hedging solutions to customers in a high-interest-rate environment, and strengthening our debt capital markets origination activities.

We have also taken proactive steps in providing sustainability-linked loans to assist our clients in transitioning to a low-carbon economy and to improve their environmental performance. These initiatives are part of our strategy to promote more sustainable business practices and to lessen environmental impact.

Our efforts to deliver customer-centric services were recognised with the 'Global Banking Award' at the High Flyers Awards, presented by Hong Kong Business in acknowledgment of our innovative banking solutions tailored for the ever-evolving financial market.

Global Markets ('GM') reported a 10% decrease in net operating income before change in ECL and other credit impairment charges, amounting to HK$2,413m. Operating profit and profit before tax both fell by 17% to HK$1,677m.

Net interest income decreased by 24% to HK$1,162m, impacted by the unfavourable interest rate environment and increased funding costs.

On the other hand, non-interest income rose by 10% to HK$1,251m. We recorded revenue growth in our repo trading, equities, and rates-related structured products. Our repo business alone saw a remarkable 79% revenue growth year-on-year, expanding by onboarding new clients and enhancing our product suite. Rates trading performed well, posting a year-on-year growth of 43%. We have adeptly capitalised on market opportunities and managed risk positions amid fluctuations in the foreign exchange and interest rate markets, achieving both qualitative and quantitative growth in 2023. Furthermore, the equities and structuring business took advantage of improved client sentiment in equity structured products.

In 2023, we achieved strong growth in our wealth products, with capital protected investment sales turnover more than doubling. Through close collaboration with other business units, turnover for our equity derivative products increased significantly, with a year-on year growth of 44%, along with a 71% growth in retail bond trading volume.

Balance sheet Analysis

Assets

Total assets decreased by HK$162bn, or 9%, to HK$1,692bn compared with the 2022 year-end, reflecting the subdued loan demand under persistent high interest rates environment. The Group maintained resilient business momentum in targeted segments and progressed with its strategy of enhancing long-term profitability through sustainable growth.

Cash and balances at central banks decreased by HK$7bn, or 40%, to HK$11bn. Trading assets and financial assets mandatorily measured at fair value through profit or loss were up marginally by HK$1bn, to HK$201bn.

Customer loans and advances (net of allowances for ECL) decreased by HK$71bn, or 8%, to HK$860bn. The decrease in loan balances reflected dampened credit demand in the elevated rates environment, accompanied by higher customer repayments.

Loans for use in Hong Kong decreased by 4% due to the subdued loan demand under a persistent high interest rates environment.

Residential mortgages and Government Home Ownership Scheme/Private Sector Participation Scheme/Tenants Purchase Scheme lending grew by 5% and 15% respectively, reflecting loan drawdowns to finance the property purchase.

Supported by the improvement in private consumption, credit card advances and other personal lending grew by 7% and 2% respectively.

Trade finance lending decreased by 6%, due mainly to weak global trade performance as reflected in the sluggish logistics industry. It also impacted by increased loan repayment under the high interest rates environment.

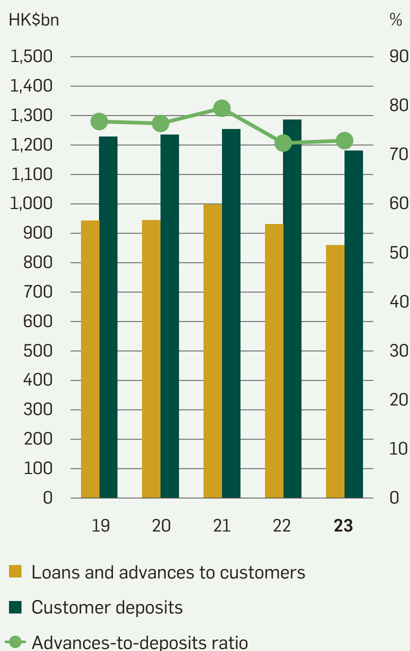
Loans for use outside Hong Kong were down by 22%, reflecting the de-risking of mainland China CRE by the Group's mainland banking subsidiary and loans for use outside Hong Kong granted by the Hong Kong office.

Financial investments dropped by HK$75bn, or 16%, to HK$406bn, reflecting decreased commercial surplus, coupled with increased fund deployment to placings with and advances to banks by HK$22bn, or 35%, to HK$84bn.

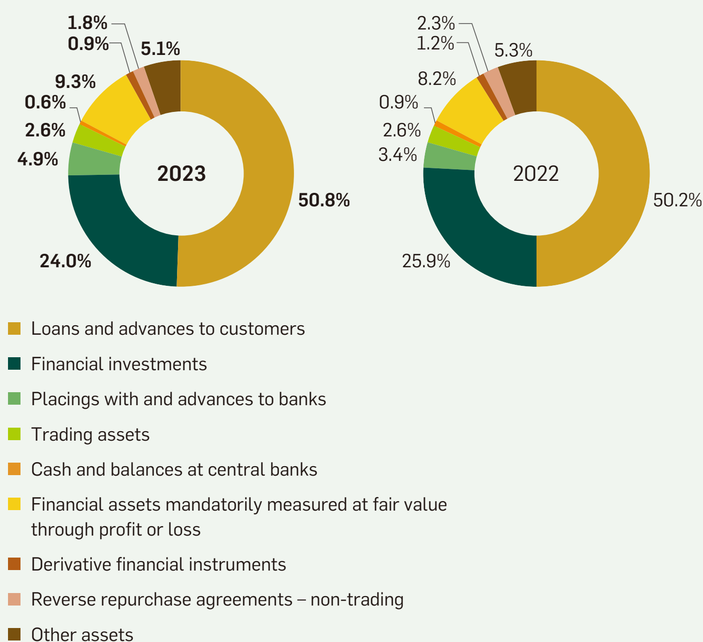
Assets Deployment

Figures in HK$m	At 31 December 2023	%	At 31 December 2022 (restated)	%
Cash and balances at central banks	10,564	0.6	17,609	0.9
Trading assets	44,018	2.6	47,373	2.6
Derivative financial instruments	14,959	0.9	22,761	1.2
Financial assets mandatorily measured at fair value through profit or loss	156,872	9.3	152,957	8.2
Reverse repurchase agreements – non-trading	30,202	1.8	42,364	2.3
Placings with and advances to banks	83,756	4.9	62,203	3.4
Loans and advances to customers	860,406	50.8	931,334	50.2
Financial investments	405,792	24.0	480,698	25.9
Other assets	85,525	5.1	97,147	5.3
Total assets	1,692,094	100.0	1,854,446	100.0
Return on average total assets	1.0%		0.6%	

Loans and Advances to Customers and Customer Deposits



Assets Deployment



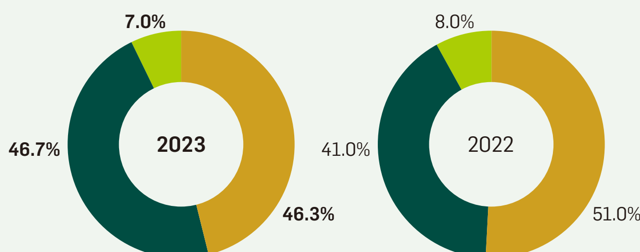
Liabilities and equity

The Group has re-defined its customer deposits categorisation in 2023 to align with major peers and HSBC Group. Deposits are now categorised as demand and current accounts, savings accounts, time, and other deposits (including structured deposits). Customer deposits decreased by HK$106bn, or 8%, to HK$1,181bn from the end of 2022, attributable mainly to the Group proactively managing its liabilities amid market interest rate rises and subdued loan demand.

CASA as a percentage of total customer deposits decreased from 59.0% at the 2022 year-end to 53.3% at 31 December 2023, reflecting continued migration of deposits from CASA to time deposits due to the rising interest rates environment. At 31 December 2023, the advances-to-deposits ratio was 72.9%, compared with 72.4% at 31 December 2022.

Figures in HK$m	At 31 December 2023	At 31 December 2022 (restated)
Customer loans and advances (net of allowances for ECL)	**860,406**	931,334
Customer deposits, including structured deposits	**1,180,611**	1,286,624
Advances-to-deposits ratio	**72.9%**	72.4%

Customer Deposits



Shareholders' equity

Figures in HK$m	At 31 December 2023	At 31 December 2022 (restated)
Share capital	**9,658**	9,658
Retained profits	**126,624**	118,717
Other equity instruments	**11,744**	11,744
Premises revaluation reserve	**18,525**	18,338
Cash flow hedging reserve	**(96)**	(816)
Financial assets at fair value through other comprehensive income reserve	**1,579**	1,737
Other reserves	**97**	555
Total reserves	**158,473**	150,275
Total shareholders' equity	**168,131**	159,933
Return on average ordinary shareholders' equity	**11.3%**	7.2%

At 31 December 2023, shareholders' equity increased by HK$8bn, or 5%, to HK$168bn, driven by an increase in retained profits of HK$8bn, or 7%, reflecting profit accumulation after the appropriation of dividends paid during the year. The cash flow hedging reserve reported negative balances of HK$96m and HK$816m at the end of 2023 and 2022, mainly reflecting the interest rate movements of hedging derivatives during the year. The financial assets at fair value through other comprehensive income reserve reduced by HK$0.2bn, or 9%, mainly contributed by the net impact of the fair value losses in equity instruments and the fair value gains in debt instruments. The foreign currency exchange reserve also dropped by HK$449m as a result of the depreciation of the RMB currency.

RISK

(Figures expressed in millions of Hong Kong dollars unless otherwise indicated)

Our approach to risk

(unaudited)

Our risk appetite

We recognise the importance of a strong risk culture, which refers to our shared attitudes, 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. Our risk appetite defines the level and types of risk that we are willing to take, while informing the financial planning process and guiding strategic decision making.

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 business.
- We are committed to managing the climate risks that have an impact on our financial position, and contributing to HSBC Group's 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 a result of failed internal processes, people and systems or from external events.

Our risk appetite is expressed in both quantitative and qualitative terms. It continues to evolve and expand its scope as part of our regular review process.

The Board reviews and approves the Group's risk appetite twice a year to make sure it remains fit for purpose. The 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 risk appetite statement ('RAS'), which is approved by the Board on the recommendation of the Risk Committee ('RC'). Setting out our risk appetite helps ensure 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 consists of qualitative statements and quantitative metrics, covering financial and non-financial risks. It is applied to the development of business line strategies, strategic and business planning, and remuneration.

Performance against the RAS is reported to the Risk Management Meeting ('RMM') regularly 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.

Risk Management

We recognise that the primary role of risk management is to help 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.

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 effective 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 identify, assess, manage and report the risks we accept and incur in our activities, with clear accountabilities. We continue to enhance our approach to manage risk, through our activities with regard to people and capabilities; governance; reporting and management information; credit risk management models; and data.

Our risk management framework

The following diagram and descriptions summarise key aspects of the risk management framework, including governance and structure, our risk management tools and our risk culture, which together help align employee behaviour with our risk appetite.

Key components of our risk management framework

Our Values and Risk Culture

Risk governance	Non-executive risk governance	The Board approves the risk appetite, plans and performance targets. It sets the 'tone from the top' and is advised by the RC.
	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.
Roles and responsibilities	Three lines of defence model	Our 'Three lines of defence' model defines roles and responsibilities for risk management. An independent Risk and Compliance function helps ensure the necessary balance in risk/return decisions.
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	Non-financial risk stewards define the minimum control standards for managing non-financial risks.
	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. It is advised on risk-related matters by the RC.

The Chief Risk and Compliance Officer, supported by the RMM, holds executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework.

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 the Group's business and functional structures.

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 RMM.

A Product Oversight Committee reporting to the RMM and comprising senior executives from Risk and Compliance, Legal, Finance, and Operations/IT, is responsible for reviewing and approving the launch of such new products and services. Each new service and product launch is also subject to an operational risk self-assessment process, which includes identification, evaluation and mitigation of risk arising from the new initiative. Internal Audit is consulted on the internal control aspect of new products and services in development prior to implementation.

Our roles and 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 structure.

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. This 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 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 on effective risk management.
- The third line of defence is our Internal Audit function, which provides independent assurance that our risk management, governance and internal control processes are designed and operating effectively.

Independent risk and compliance function

The Group's Risk and Compliance function, headed by the Chief Risk and Compliance Officer, is responsible for the Group's risk management framework. This responsibility includes establishing and monitoring of risk profiles, and identifying and managing forward-looking risk. The Group's Risk and Compliance function is made up of sub-functions covering all risks to our business. Forming part of the second line of defence, the Group's Risk and Compliance function is independent from the business, 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 various specialist Risk Stewards and the collective accountability held by the Chief Risk and Compliance Officer and global businesses.

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 and the associated controls. It incorporates a risk management system designed to enable the active management of non-financial risk.

Risk management tools

(unaudited)

The Group uses a range of tools to identify, monitor and manage risk. The key tools are summarised below.

Risk appetite

Risk Appetite ('RA') is defined as the level and types of risks that the Group is willing to take to achieve our strategic objectives. RA is articulated through RAS, which consists of qualitative statements and quantitative metrics covering both financial and non-financial risks that are material to the Group.

RA supports senior management in allocating capital, funding, and liquidity optimally to finance strategic growth within acceptable risk levels, while monitoring exposure of non-financial risks which may impact our customers or lead to sub-optimal returns to shareholders, regulatory censure, or reputational damage. The RMM reviews the Group's actual risk appetite profile in which the quantitative metrics have pre-defined Risk Appetite and Risk Tolerance thresholds against which performance is measured and monitored. The actual risk appetite profile is also reported to the RC and the Board by Chief Risk and Compliance Officer including breach commentary.

Risk map

The Group uses a risk map to provide a point-in-time view of its residual risk profile across both financial and non-financial risks. This highlights the potential for these risks to materially affect our financial results, reputation or business sustainability. Risk stewards assign risk ratings, supported by commentary. Risks that have an 'Amber' or 'Red' risk rating require monitoring and mitigating action plans being either in place or initiated to manage the risk down to acceptable levels.

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 organisation and global businesses, for any risks that may require escalation, and update our top and emerging risks as necessary.

Stress testing and recovery planning

The Group operates a wide-ranging stress testing programme that is a key part of our risk management, 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 the Group.

The selection of stress scenarios is based upon the output of our top and emerging risks identified and our risk appetite. Stress testing analysis helps management understand the nature and extent of vulnerabilities which the Group is exposed to. Using this information, management decides whether risks can or should be mitigated through management actions or, if they were to crystallise, should be absorbed through capital and liquidity. This in turn informs decisions about preferred levels and allocations of capital and liquidity resources.

The Group also participate, as required, in the regulatory stress testing programmes of the jurisdictions in which they operate, including the stress tests of the HKMA. Functions and businesses also perform bespoke stress testing to inform their assessment of risks in potential scenarios.

We also conduct reverse stress tests each year at a 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.

The Group stress testing programme is overseen by the RC and results are reported, where appropriate, to the RMM, RC and the Board.

Recovery and resolution plans

Recovery and resolution plans form an integral framework in the safeguarding of the Group's financial stability. The recovery plan, together with stress testing, helps us understand the likely outcomes of adverse business or economic conditions and in the identification of appropriate mitigating actions.

Key developments in 2023

We continued to actively manage the risks related to macroeconomic and geopolitical uncertainties, as well as the risks resulting from the China commercial real estate ('CRE') sector and other key risks described in this section.

In 2023, we enhanced our risk management in the following areas:

- We continued to enhance our risk governance decision making to ensure senior executives have appropriate oversight.
- We adapted our interest rate risk management strategy as market and official interest rates increased in reaction to inflationary pressures.
- We have continued to strengthen our third-party risk policy and have enhanced the way third party risk is overseen and managed across all non-financial risks. Our processes, framework and reporting capabilities have been enhanced to improve control and oversight of our material third parties to help maintain our operational resilience, and to meet new and evolving regulatory requirements.
- We continued to make progress with our comprehensive regulatory reporting programme to strengthen our processes, improve consistency, and enhance controls across regulatory reports.
- We continued to embed climate considerations throughout the organisation, including through risk policy updates and continued development of risk metrics to monitor and manage our exposure to climate risk.
- We deployed industry-leading technology and advanced analytics capabilities to improve our ability to identify suspicious activities and prevent financial crime.
- We continued to develop and enhance our electronic communication policies and standards, to help ensured we acted on substantive issues.
- We are embedding our suite of regulatory management systems following the Group-wide roll-out of regulatory horizon scanning capabilities and enhanced regulation mapping tooling.

Areas of special interest

During 2023, 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. We place particular focus in this section on geopolitical and macroeconomic risks, technology and cyber security risk, financial crime risk and climate related risks.

Geopolitical and macroeconomic risks

(unaudited)

The US-China relationship remains complex. To date, the US, the UK, the EU and other countries have imposed various sanctions and trade restrictions on Chinese persons and companies and the countries' respective approaches to strategic competition with China continue to develop. Although sanctions and trade restrictions are difficult to predict, increases in diplomatic tensions between China and the US and other countries could result in further sanctions and trade restrictions that could negatively impact the Group, its customers and the markets in which the Group operates. For example, 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 which 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, as well as certain law enforcement measures, have been imposed against certain Western consulting and data intelligence firms, defense companies, and public officials associated with the implementation of foreign sanctions against China.

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.

While it is the Group's policy to comply with all applicable laws and regulations of all jurisdictions in which it operates, geopolitical tensions, and potential ambiguities in the Group's compliance obligations will continue to present challenges and risk for the Group and could have a material adverse impact on the Group's business, financial condition, results of operations, prospects, strategy and reputation, as well as the Group's customers.

China's expanding data privacy, national security and cybersecurity laws 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. In Hong Kong, there is also an increasing focus by regulators on the use of big data and Artificial Intelligence.

The Russia-Ukraine war continues to have far-reaching geopolitical and economic implications beyond those two countries borders. There is also uncertainty about the scope, duration and potential escalation of the Israel-Hamas war. The Group is monitoring the impacts of these wars.

The Group continues to respond to evolving economic sanctions and trade restrictions, in particular significant sanctions and trade restrictions imposed against Russia by the UK, the US and the EU, as well as other countries. Such sanctions and restrictions have targeted certain Russian government officials, politically exposed persons, business people, Russian oil imports, energy products, financial institutions, and other major Russian companies and sanctions evasion networks. More generally applicable investment, export, and import bans and restrictions have also been implemented. In addition, US authorities have been granted significant and broad discretion to impose secondary sanctions on non-US banks engaged in certain transactions or services involving Russia's military-industrial base. In response to such sanctions and trade restrictions, as well as asset flight, Russia has implemented certain countermeasures including the expropriation of foreign assets.

Further sanctions, counter-sanctions, and trade restrictions across the markets in which the Group operates may adversely impact the Group, its customers and the markets by creating regulatory, reputational and market risks.

Global commodity markets have been significantly impacted by the Russia-Ukraine war, 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.

China enacted policy measures in the third quarter of 2023 to support its flagging property sector. These measures are intended to encourage bank lending to developers, which could help accelerate the reduction in the stock of unfinished homes. Recovery in the underlying domestic residential demand and improved customer sentiment nevertheless remain 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 remain weak, the demand for Chinese exports may also diminish.

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. There is uncertainty with respect to the relationship between the economic drivers and the historical loss experience, which may require adjustments to modelled ECL in cases where we determined that the model was unable to capture the material underlying risks.

Mitigating actions

- We continue to monitor, and seek to manage, the potential implications of all the above developments on our customers and our business.
- We closely monitor the geopolitical and economic developments in key markets and sectors and actively manage our credit portfolio through enhanced monitoring, thematic reviews, internal stress tests, etc.
- We continue to support our customers and manage risk and exposures as appropriate.
- We continue to manage sanctions and trade restrictions through the use of, testing and auditing of, and enhancements to, our existing controls.

Technology and cyber security risk

(unaudited)

We operate an extensive and complex technology landscape, which must remain resilient in order to support customers and the Group. Risks arise where technology is not understood, maintained, or developed appropriately. Together with other organisations, we continue to operate in an increasingly hostile cyber threat environment. 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 them.

Mitigating actions

- We continue to invest in transforming how software solutions are developed, delivered and maintained. We invest both to improve system resilience and test service continuity. We continue to ensure security is built into our software development life cycle and improve our testing processes and tools.
- We continue to upgrade our IT systems, simplify our service provision and replace older IT infrastructure and publications.
- We continually evaluate threat levels for the most prevalent attack types and their potential outcomes. To further protect the Group 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 across our global businesses, functions and markets to help ensure appropriate visibility and governance of the risk and mitigating actions.
- We continue to obtain information about tactics employed by cybercrime groups and to collaborate in fighting, detecting and preventing cyber-attacks on financial organisations.

Financial Crime Risk

(unaudited)

Financial institutions remain under considerable regulatory scrutiny regarding their ability to detect and prevent financial crime. These risks were in 2023 exacerbated by rising geopolitical tensions and worsening macroeconomic factors. These challenges include managing conflicting laws and approaches to legal and regulatory regimes, and implementing increasingly complex and less predictable sanctions and trade restrictions.

Amid high levels of inflation and increasing cost of living pressures, we face increasing regulatory expectations with respect to managing internal and external fraud and protecting vulnerable customers. In addition, the accessibility and increasing sophistication of generative Artificial Intelligence ('AI') brings financial crime risks. While there is potential for the technology to support financial crime detection, there is also material risk that criminals use generative AI to perpetrate fraud, particularly scams.

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 continue to increase with respect to the intersection of environmental, social and governance ('ESG') issues and financial crime, as our organisation, customers and suppliers transition to net zero. 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 AI.
- 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 regularly review our existing policies and control framework so that developments relating to ESG are considered and the risks mitigated to the extent possible.
- We engage with regulators and policymakers, seeking to address data privacy challenges through international standards, guidance, and legislation.

Climate related risk

(unaudited)

We are exposed to several risks resulting from climate change and the move to a net zero economy:

- We may face credit losses if our customers 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 may face trading losses if we fail to accurately reflect the risks associated with climate risk within our trading book assets.
- We may face impacts from physical risk on our own operations, 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.
- We may face increased reputational, legal and regulatory risk if we fail to make sufficient progress towards our climate ambition, or if we fail to meet evolving regulatory expectations and requirements on climate risk management, or if we knowingly or unknowingly make inaccurate, unclear, misleading, or unsubstantiated claims regarding sustainability to stakeholders.
- We may face financial 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. 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.
- We may face model risk, as the uncertain impacts of climate change and data and methodology limitations present challenges to creating reliable and accurate model outputs.
- We may be exposed to climate related litigation risks, either directly if stakeholders feel we are not adequately managing climate risks or indirectly if our clients and customers are themselves the subject of litigation, potentially resulting in the revaluation of client assets.

Mitigating actions

- We aim to deepen our understanding of the drivers of climate risk. During 4Q 2023, we have enhanced climate risk management oversight by including a new standing agenda item on sustainability and climate risk for first line of defence and second line of defence to provide update to the Risk Management Meeting.
- We continue to accelerate 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 continue to enhance our approach and mitigation to the risk of greenwashing.
- In January 2024, energy policy has been updated to cover 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. Thermal coal phase-out policy has also been updated, in which no new finance or advisory services to be provided for the specific purposes of new metallurgical coal mines.
- The scope of financial reporting risk was expanded to explicitly include oversight over accuracy and completeness of ESG and climate reporting. Aligned with HSBC Group, we also updated our risk taxonomy and control library to incorporate requirements for addressing the risk of misstatement in ESG and climate reporting.
- We continue to engage with our customers, investors and regulators proactively on the management of climate related risks.

Our material banking and insurance risks

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables.

Description of risks – banking operations

(unaudited)

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
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 certain other products such as guarantees and derivatives.	Credit risk is: – measured as the amount which could be lost if a customer or counterparty fails to make repayments; – monitored 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		
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 foreign exchange exposures and changes in market interest rates, and including the financial risks arising from historic and current provision of pensions and other post-employment benefits to staff and their dependents.	Treasury risk arises from changes to the respective resources and risk profiles driven by customer behaviour, management decisions, or pension plan fiduciary decisions. It also arises from the external environment, including changes to market parameters such as interest rates or foreign exchange rates, together with updates to the regulatory requirements.	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		
Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: trading and non-trading. Market risk for non-trading portfolios is discussed in the 'Treasury risk' section. Market risk exposures arising from our insurance operations are discussed in 'Insurance manufacturing operation risk' section.	Market risk is: – measured using sensitivities, value at risk ('VaR') 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 VaR, stress testing and other measures; and – managed using risk limits approved by Chief Risk and Compliance Officer. These limits are allocated across the Group's legal entities and business lines.
Climate risk		
Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a net zero economy.	Climate risk is likely to 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;	Climate risk is: – measured using risk metrics and stress testing; – monitored against risk appetite statements; and – managed through adherence to risk appetite thresholds through specific policies, and through enhancements to processes and development of tools including the development of product market controls to manage the risk of greenwashing and the development of portfolio steering capabilities to manage our net zero targets.

Risks	Arising from	Measurement, monitoring and management of risk
Climate risk continued		
	– net zero alignment risk, which arises from failing to meet its net zero commitments or to meet external expectations related to net zero because of inadequate ambition and/or plans, poor execution, or inability to adapt to changes in the external environment; and – risk of greenwashing, which arises from the act of knowingly or unknowingly making inaccurate, unclear, misleading or unsubstantiated claims regarding sustainability to stakeholders.	
Resilience risk		
Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates and counterparties as a result of sustained and significant operational disruption.	Resilience risk arises from failures or inadequacies in processes, people, systems or external events.	Resilience risk is: – measured through 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		
Regulatory compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct (including unauthorised trading) and breaching related financial services regulatory standards.	Regulatory compliance risk arises from the failure to observe the 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 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		
Financial crime risk is the risk that the Group'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 and assessment of our financial crime risk 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 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.

Description of risks – banking operations continued

(unaudited)

Risks	Arising from	Measurement, monitoring and management of risk
Model risk		
Model risk is the potential for adverse consequences from business decisions arising from the use of models that have been inadequately designed, implemented or used or that model does 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 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.

Description of risks – insurance manufacturing operations

(unaudited)

Our insurance manufacturing subsidiary is separately regulated from our banking operations. Risks in the insurance entities are managed using methodologies and processes appropriate to insurance manufacturing operations, but remain subject to oversight at Group level. Our insurance operations are also subject to some of the same risks as our banking operations, which are covered by the Group's respective risk management processes.

Risks	Arising from	Measurement, monitoring and management of risk
Insurance underwriting risk		
Insurance underwriting risk is the risk that, over time, the cost of acquiring and administering an insurance contract, and paying claims and benefits may exceed the total amount of premiums received and investment income.	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 underwriting 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.
Financial risk		

Our ability to effectively match the liabilities arising under insurance contracts with the asset portfolios that back them is contingent on the management of financial risks and the extent to which these risks are borne by the policyholders.	Exposure to financial risks arises from:
	– market risk of changes in 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 separately for each type of risk:
		  – market risk is measured in terms of economic capital, internal metrics and fluctuations in key financial variables;
		  – credit risk is measured in terms of economic capital and the amount that could be lost if a counterparty fails to make repayments; and
		  – liquidity risk is measured 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.

The following information describes the Group's management and control of risks, in particular, those associated with its use of financial instruments ('financial risks'). Major types of risks to which the Group is exposed include credit risk, treasury risk, market risk, climate risk, resilience risk, regulatory compliance risk, financial crime risk, model risk, and insurance risk.

(a) Credit Risk

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 2023

(unaudited)

There were no material changes to the policies and practices for the management of credit risk in 2023. We continued to apply the requirements of HKFRS 9 *'Financial Instruments'* within Credit Risk sub-function.

We actively managed the risks related to macroeconomic uncertainties, including fiscal and monetary policy and broader geopolitical uncertainties.

Governance and structure

(unaudited)

We have established credit risk management and related HKFRS 9 processes throughout the Group. 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 action, 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)

With the delegation from the Board, credit approval authorities are delegated to the Executive Committee and to the Chief Executive together with the authority to sub-delegate them. The Credit Risk sub-function is responsible for the key policies and processes for managing credit risk, which include formulating the Group's 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 the Group 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 causes and their mitigation.

Key risk management processes

HKFRS 9 'Financial Instruments' process

(unaudited)

The HKFRS 9 process comprises three main areas: modelling and data; implementation; and governance.

Modelling and data

(unaudited)

We have established HKFRS 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 at the HSBC Group for generating unbiased and independent global economic scenarios. Scenarios are subject to a process of review and challenge by a dedicated team at the HSBC Group, as well as the Bank and 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 our Impairment Committee.

(a) Credit Risk

Credit risk management continued

Key risk management processes continued

Implementation

(unaudited)

A centralised impairment engine performs the expected credit losses ('ECL') 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 within HSBC Group.

Governance

(unaudited)

Management review forums are established in order to review and approve the impairment results. Management review forums have representatives from Business, Credit Risk and Finance. The approvals are subsequently reported up to the Impairment Committee for final approval of the Group's ECL for the period. Required members of the Impairment Committee are the Chief Risk and Compliance Officer, the Chief Financial Officer and the Chief Accounting Officer, as well as the Head of Wholesale Credit Risk Management and the Head of Wealth and Personal Banking Risk.

Concentration of exposure

(audited)

Concentrations of credit risk arise when a number of counterparties or exposures that have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors. As such 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 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 each 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

(unaudited)

A 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

(unaudited)

Retail lending credit quality is based on a 12-month probability-weighted PD.

(a) Credit Risk

Credit risk management continued

Key risk management processes continued

Credit quality classification

(unaudited)

	Sovereign debt securities and bills	Other debt securities and bills	Wholesale lending		Retail lending	
Credit quality classification[1,2]	External credit rating	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12-month probability-weighted PD %
Strong	BBB and above	A- and above	CRR 1 to CRR 2	0-0.169	Band 1 and 2	0-0.500
Good	BBB- to BB	BBB+ to BBB-	CRR3	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 ('PIT') 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 2(j) on the Consolidated Financial Statements.

Forborne loans and forbearance

(audited)

Forbearance measures consist of concessions towards an obligor that is experiencing or is about to experience difficulties in meeting its financial commitments.

We continue to classify 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. Our definition of forborne captures non-payment-related concessions, such as covenant waivers.

For details of our policy on derecognition of forborne loans, see note 2(j) on the Consolidated Financial Statements.

Credit quality of forborne loans

(unaudited)

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.

(a) Credit Risk

Credit risk management continued

Key risk management processes continued

Credit quality of forborne loans continued

(unaudited)

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.

Non-performing 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.

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 2(j) on the Consolidated Financial Statements.

Write-off of loans and advances

(audited)

For our policy on the write-off of loans and advances, see note 2(j) on the Consolidated Financial Statements.

Under the HKFRS 9 standard, write-off should occur when there is no reasonable expectation of recovering further cash flows from the financial asset. This principle does not prohibit early write-off which is defined in local policies to ensure effectiveness in the management of customers in the collections process.

Unsecured personal facilities, including credit cards, are generally written off at 180 days contractually delinquent. Write-off periods may be earlier, e.g. bankruptcy.

For secured personal 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. 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.

Any secured assets maintained on the balance sheet beyond 60 months of consecutive delinquency-driven default or unsecured facilities that exceed 180 days require additional monitoring and review to assess the prospect of recovery. Collection procedures may continue after write-off.

Wholesale facilities are to be fully written off when, after realisation of any available security, there is no realistic prospect of further recoveries. Partial write-offs may be made where appropriate. Any portion of an instrument that is not covered by security should be written off when there is no realistic prospect of further recovery, and final write-off should occur upon receipt of proceeds following the realisation of security. Recovery activity may continue after write-off.

(a) Credit Risk

Summary of credit risk

The following tables analyse the financial instruments to which the impairment requirements of HKFRS 9 are applied and the related allowance for ECL.

Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied

(audited)

	At 31 December 2023		At 31 December 2022 (restated)	
	Gross carrying/ nominal amount	**Allowance for ECL[1]**	Gross carrying/ nominal amount	Allowance for ECL[1]
Loans and advances to customers at amortised cost	**874,039**	**(13,633)**	944,728	(13,394)
Placings with and advances to banks at amortised cost	**83,760**	**(4)**	62,206	(3)
Other financial assets measured at amortised costs:	**172,015**	**(59)**	216,802	(47)
– cash and balances at central banks	**10,564**	**–**	17,612	(3)
– reverse repurchase agreements – non-trading	**30,202**	**–**	42,364	–
– financial investments	**100,452**	**(14)**	119,721	(14)
– other assets[2]	**30,797**	**(45)**	37,105	(30)
Total gross carrying amount on balance sheet	**1,129,814**	**(13,696)**	1,223,736	(13,444)
Loans and other credit-related commitments	**345,932**	**(155)**	357,265	(169)
Financial guarantee and similar contracts	**1,882**	**(4)**	1,727	(2)
Total nominal amount off balance sheet[3]	**347,814**	**(159)**	358,992	(171)
Total	**1,477,628**	**(13,855)**	1,582,728	(13,615)
	Fair value	**Memorandum Allowance for ECL**	Fair value	Memorandum Allowance for ECL
Debt instruments measured at Fair Value through Other Comprehensive Income ('FVOCI')[4]	**301,294**	**(3)**	356,058	(6)

1 For retail unsecured revolving facilities, e.g. overdrafts and credit cards, the total ECL is recognised against the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised against the loan commitments.

2 Includes only those financial instruments which are subject to the impairment requirements of HKFRS 9. 'Other assets' as presented within the Consolidated Balance Sheet includes both financial and non-financial assets.

3 The figure does not include some loan commitments and financial guarantee contracts not subject to impairment requirements under HKFRS 9. As such, the amount does not agree with the figure shown in note 43 of the Consolidated Financial Statements, which represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

4 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 Consolidated Income Statement.

(a) Credit Risk

The following table provides an overview of the Group's credit risk by stage 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

(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	Total	Stage 1	Stage 2	Stage 3	POCI	Total
Loans and advances to customers at amortised cost	713,524	135,766	24,632	117	874,039	(709)	(3,766)	(9,158)	–	(13,633)	0.10%	2.77%	37.18%	0.00%	1.56%
– personal	378,928	20,150	829	–	399,907	(337)	(1,219)	(150)	–	(1,706)	0.09%	6.05%	18.09%	N/A	0.43%
– corporate and commercial	305,400	114,533	23,803	117	443,853	(335)	(2,542)	(9,008)	–	(11,885)	0.11%	2.22%	37.84%	0.00%	2.68%
– non-bank financial institutions	29,196	1,083	–	–	30,279	(37)	(5)	–	–	(42)	0.13%	0.46%	N/A	N/A	0.14%
Placings with and advances to banks at amortised cost	83,707	53	–	–	83,760	(4)	–	–	–	(4)	0.00%	0.00%	N/A	N/A	0.00%
Other financial assets measured at amortised cost	170,288	1,657	70	–	172,015	(41)	(3)	(15)	–	(59)	0.02%	0.18%	21.43%	N/A	0.03%
Loans and other credit-related commitments	326,835	19,094	3	–	345,932	(84)	(71)	–	–	(155)	0.03%	0.37%	0.00%	N/A	0.04%
– personal	237,408	7,678	3	–	245,089	(4)	–	–	–	(4)	0.00%	0.00%	0.00%	N/A	0.00%
– corporate and commercial	68,626	10,609	–	–	79,235	(70)	(69)	–	–	(139)	0.10%	0.65%	N/A	N/A	0.18%
– non-bank financial institutions	20,801	807	–	–	21,608	(10)	(2)	–	–	(12)	0.05%	0.25%	N/A	N/A	0.06%
Financial guarantee and similar contracts	1,240	642	–	–	1,882	(1)	(3)	–	–	(4)	0.08%	0.47%	N/A	N/A	0.21%
– personal	1	5	–	–	6	–	–	–	–	–	0.00%	0.00%	N/A	N/A	0.00%
– corporate and commercial	849	637	–	–	1,486	(1)	(3)	–	–	(4)	0.12%	0.47%	N/A	N/A	0.27%
– non-bank financial institutions	390	–	–	–	390	–	–	–	–	–	0.00%	N/A	N/A	N/A	0.00%
At 31 December 2023	1,295,594	157,212	24,705	117	1,477,628	(839)	(3,843)	(9,173)	–	(13,855)	0.06%	2.44%	37.13%	0.00%	0.94%

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 disclosure below presents the aging of stage 2 loans and advances to customers by those less than 30 and greater than 30 days past due and therefore presents those amounts classified as stage 2 due to aging (30 days past due) and those identified at an earlier stage (less than 30 days past due).

(a) Credit Risk

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage continued

(audited)

Stage 2 days past due analysis for loans and advances to customers

(audited)

	At 31 December 2023											
	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD[1]	Of which: 30 and > DPD	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD	Of which: 30 and > DPD	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD	Of which: 30 and > DPD
Loans and advances to customers at amortised cost												
– personal	20,150	17,055	2,042	1,053	(1,219)	(1,030)	(76)	(113)	6.05%	6.04%	3.72%	10.73%
– corporate and commercial	114,533	114,159	292	82	(2,542)	(2,536)	(5)	(1)	2.22%	2.22%	1.71%	1.22%
– non-bank financial institutions	1,083	1,083	–	–	(5)	(5)	–	–	0.46%	0.46%	N/A	N/A
	135,766	132,297	2,334	1,135	(3,766)	(3,571)	(81)	(114)	2.77%	2.70%	3.47%	10.04%

1 Days past due ('DPD').

(restated)

	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	Total	Stage 1	Stage 2	Stage 3	POCI	Total
Loans and advances to customers at amortised cost	759,642	160,874	23,911	301	944,728	(755)	(4,818)	(7,802)	(19)	(13,394)	0.10%	2.99%	32.63%	6.31%	1.42%
– personal	365,249	16,568	923	–	382,740	(203)	(1,029)	(141)	–	(1,373)	0.06%	6.21%	15.28%	N/A	0.36%
– corporate and commercial	362,629	142,378	22,988	301	528,296	(420)	(3,785)	(7,661)	(19)	(11,885)	0.12%	2.66%	33.33%	6.31%	2.25%
– non-bank financial institutions	31,764	1,928	–	–	33,692	(132)	(4)	–	–	(136)	0.42%	0.21%	N/A	N/A	0.40%
Placings with and advances to banks at amortised cost	62,012	194	–	–	62,206	(2)	(1)	–	–	(3)	0.00%	0.52%	N/A	N/A	0.00%
Other financial assets measured at amortised cost	215,591	1,211	–	–	216,802	(38)	(9)	–	–	(47)	0.02%	0.74%	N/A	N/A	0.02%
Loans and other credit-related commitments	339,402	17,835	28	–	357,265	(70)	(99)	–	–	(169)	0.02%	0.56%	0.00%	N/A	0.05%
– personal	239,954	7,260	5	–	247,219	(4)	–	–	–	(4)	0.00%	0.00%	0.00%	N/A	0.00%
– corporate and commercial	86,843	10,071	23	–	96,937	(63)	(99)	–	–	(162)	0.07%	0.98%	0.00%	N/A	0.17%
– non-bank financial institutions	12,605	504	–	–	13,109	(3)	–	–	–	(3)	0.02%	0.00%	N/A	N/A	0.02%
Financial guarantee and similar contracts	1,029	694	4	–	1,727	–	(2)	–	–	(2)	0.00%	0.29%	0.00%	N/A	0.12%
– personal	2	5	–	–	7	–	–	–	–	–	0.00%	0.00%	N/A	N/A	0.00%
– corporate and commercial	637	689	4	–	1,330	–	(2)	–	–	(2)	0.00%	0.29%	0.00%	N/A	0.15%
– non-bank financial institutions	390	–	–	–	390	–	–	–	–	–	0.00%	N/A	N/A	N/A	0.00%
At 31 December 2022	1,377,676	180,808	23,943	301	1,582,728	(865)	(4,929)	(7,802)	(19)	(13,615)	0.06%	2.73%	32.59%	6.31%	0.86%

1 Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

2 Purchased or originated credit-impaired ('POCI').

(a) Credit Risk

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage continued

(audited)

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 disclosure below presents the aging of stage 2 loans and advances to customers by those less than 30 and greater than 30 days past due and therefore presents those amounts classified as stage 2 due to aging (30 days past due) and those identified at an earlier stage (less than 30 days past due).

Stage 2 days past due analysis for loans and advances to customers

(audited)

	At 31 December 2022											
	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD[1]	Of which: 30 and > DPD	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD	Of which: 30 and > DPD	Stage 2	Of which: Up-to-date	Of which: 1 to 29 DPD	Of which: 30 and > DPD
Loans and advances to customers at amortised cost												
– personal	16,568	14,210	1,614	744	(1,029)	(887)	(62)	(80)	6.21%	6.24%	3.84%	10.75%
– corporate and commercial	142,378	142,029	195	154	(3,785)	(3,774)	(10)	(1)	2.66%	2.66%	5.13%	0.65%
– non-bank financial institutions	1,928	1,928	–	–	(4)	(4)	–	–	0.21%	0.21%	N/A	N/A
	160,874	158,167	1,809	898	(4,818)	(4,665)	(72)	(81)	2.99%	2.95%	3.98%	9.02%

1 Days past due ('DPD').

(i) Maximum exposure to credit risk before collateral held or other credit enhancements

(audited)

Our credit exposure is spread across a broad range of asset classes, including but not limited to derivatives, trading assets, loans and advances and financial investments.

The following table presents the maximum exposure to credit risk from balance sheet and off-balance sheet financial instruments, before taking account of any collateral held or other credit enhancements (unless such credit enhancements meet accounting offsetting requirements). For financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts 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.

	2023	2022 (restated)
Cash and balances at central banks	10,564	17,609
Trading assets	43,985	47,330
Derivative financial instruments	14,959	22,761
Financial assets mandatorily measured at fair value through profit or loss	119,784	124,962
Reverse repurchase agreements – non-trading	30,202	42,364
Placings with and advances to banks	83,756	62,203
Loans and advances to customers	860,406	931,334
Financial investments	401,732	475,765
Other assets	30,999	37,292
Financial guarantees and other credit related contingent liabilities[1]	22,969	24,943
Loan commitments and other credit related commitments	503,632	518,838
	2,122,988	2,305,401

1 Performance and other guarantees were included.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates

(audited)

The recognition and measurement of ECL involve 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 assessed the current economic environment, reviewed the latest economic forecasts and discussed key risks before selecting the economic scenarios and their weightings.

Management judgemental adjustments are used to address late-breaking events, data, model limitations, model deficiencies and expert credit judgements. Scenarios were constructed to reflect the latest geopolitical risks and macroeconomic developments.

At 31 December 2023, management recognised an improvement of the economic outlook and a reduction in uncertainty in most markets which consequently reverted weightings of the Central scenario to the standard 75%.

Methodology

At 31 December 2023, four scenarios were used to capture the latest economic expectations and to articulate management's view of the range of risks and potential outcomes. Each scenario is updated with the latest economic forecasts and estimates every quarter.

Three scenarios, the Upside, Central and Downside, are drawn from external consensus forecasts, market data and distributional estimates of the entire range of economic outcomes. The fourth scenario, the Downside 2, represents management's view of severe downside risks.

The Central scenario is deemed the 'most likely' scenario, and usually attracts the largest probability weighting. It is created using consensus forecasts, which is the average of a panel of external forecasts.

The outer scenarios represent the tails of the distribution and are less likely to occur. The Consensus Upside and Downside scenarios are created with reference to distributions for select markets that capture forecasters' views of the entire range of economic outcomes. In the later years of those scenarios, projections revert to long-term consensus expectations. Reversion to trend expectations is done, 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. Consistent with HSBC Group globally, it is a narrative-driven scenario that explores a more extreme economic outcome than those captured by the consensus scenarios. In this scenario, variables do not, by design, revert to long-term trend expectations and 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 to 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 and forecasts are determined to be particularly uncertain and risks are elevated.

At 31 December 2023, the standard approach to scenario weightings was applied as key uncertainty and risk metrics were aligned to their historical averages. Economic forecasts for the Central scenario have remained stable in recent months and the dispersion within the consensus forecasts panels has remained low, even as the Israel-Hamas war escalated. Risks, including the economic consequences of war in the Middle East, are reflected in downside scenarios.

Scenarios produced to calculate ECL are aligned to the Group's top and emerging risks.

Description of Consensus Economic Scenarios

The economic assumptions presented in this section have been formed with reference to external forecasts and estimates, specifically for the purpose of calculating ECL.

Forecasts remain subject to a high degree of uncertainty. Outer scenarios are constructed so that they capture risks that could alter the trajectory of the economy and are designed to encompass the potential crystallisation of number of key macro-financial risks.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

Methodology continued

Description of Consensus Economic Scenarios continued

In our key markets, Central scenario forecasts remained broadly stable in Q4 2023, from the prior quarter. The key exception was monetary policy, where expectations for interest rate cuts were brought forward. The outlook for 2024 continues to be for a period of below trend growth.

At the end of 2023, risks to the economic outlook included a number of significant geopolitical uncertainties. Within our downside scenarios, the economic consequences from the crystallisation of those risks are captured in economic downturn and recession, higher commodity and goods prices, the re-acceleration of inflation and a further rise in interest rates.

The scenarios used to calculate ECL in the 2023 Annual Report are described below.

The consensus Central scenario

The Central scenario reflects expectations for a low growth and high interest rate environment across many of our key markets, where GDP growth is expected to be weaker in 2024, relative to 2023.

In mainland China and Hong Kong, growth is also expected to be moderately slower in 2024 relative to 2023. The economic boost from post-pandemic re-opening has faded and slower global growth and low trade volumes are expected to moderate activity. In mainland China, the continued fall in investment into the property sector acts as a further brake on the economy, while in Hong Kong, higher interest rates drive further declines in property valuations. Despite these headwinds, a steeper downturn is expected to be avoided as authorities in mainland China increase fiscal and monetary support to the economy. Substantial fiscal expansion is anticipated for 2024, alongside additional credit easing.

Hong Kong GDP is expected to grow by 2.6% in 2024 in the Central scenario, and the average rate of Hong Kong GDP growth is forecast to be 2.6% 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:

- An expected slowdown in GDP growth through 2024. The key driver of weaker growth in Hong Kong is high interest rates, which act to deter consumption and investment. Weaker global growth and lower trade volumes are also key drivers. Low levels of transactions and investment into property markets remain major headwinds amid higher financing costs.
- Hong Kong unemployment rises slightly, but is set to remain low by historical standards.
- Weak conditions in housing markets are expected to persist through 2024 and 2025 in Hong Kong and mainland China, as higher interest rates and, in many cases, declining prices, depress activity.
- Policy interest rate in Hong Kong has peaked and are projected to decline in 2024. In the longer-term, they are expected to remain at a higher level compared to the post-global financial crisis period.

The Central scenario was first created with forecasts available in November, and reviewed continually until late December.

The following table describes key macroeconomic variables assigned in the consensus Central scenario.

Central scenario

	Hong Kong %	Mainland China %
GDP (annual average growth rate)		
2024	2.6	4.5
2025	2.7	4.4
2026	2.6	4.3
2027	2.6	3.8
2028	2.6	3.9
5-year average[1]	2.6	4.2
Unemployment rate (annual average rate)		
2024	3.0	5.2
2025	3.0	5.1
2026	3.2	5.1
2027	3.2	5.1
2028	3.2	5.1
5-year average[1]	3.1	5.1
House price (annual average growth rate)		
2024	(6.6)	(0.6)
2025	(0.7)	1.1
2026	2.6	2.6
2027	2.8	4.0
2028	3.0	4.5
5-year average[1]	0.2	2.3
Probability	75	75

1 The five-year average is calculated over a projected period of 20 quarters from 1Q24 to 4Q28.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

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.

The scenario is consistent with a number of key upside risk themes. These include a faster fall in the rate of inflation that allows central banks to reduce interest rates more quickly; an easing in financial conditions; and de-escalation in geopolitical tensions, as the Israel-Hamas and Russia-Ukraine wars moves towards conclusions, and the US-China relationship improves.

The following table describes key macroeconomic variables assigned in the consensus Upside scenario.

Consensus Upside scenario best outcome

	Hong Kong %	Mainland China %
GDP level (%, Start-to-peak)[1]	21.8 (4Q28)	30.4 (4Q28)
Unemployment rate (%, Min)[2]	2.4 (3Q24)	4.8 (4Q25)
House price index (%, Start-to-peak)[1]	17.9 (4Q28)	19.7 (4Q28)
Probability	10	10

1 Cumulative change to the highest level of the series during the 20-quarter projection. For GDP growth, it is based on seasonal adjusted series.

2 The lowest projected unemployment in the scenario.

Downside scenarios

Downside scenarios explore the intensification and crystallisation of a number of key economic and financial risks, in which geopolitical tensions escalate and disrupt key commodity and goods markets.

This causes inflation and interest rates to rise again and results in global recession.

As the geopolitical environment remains volatile and complex, risks include:

- a broader and more prolonged conflict in the Middle East that undermines confidence, drives an increase in global energy costs and reduces trade and investment;
- a potential escalation in the Russia-Ukraine war, which expands beyond Ukraine's borders, and further disrupts energy, fertilizer and food supplies; and
- continued differences between the US and China, which could affect confidence, the global goods trade and supply chains for critical technologies.

High inflation and higher interest rates also remain key risks. Should geopolitical tensions escalate, energy and food prices could rise and increase pressure on household budgets and firms' costs.

The Consensus Downside scenario

In the consensus Downside scenario, economic activity is weaker compared with the Central scenario. In this scenario, GDP declines, unemployment rates rise, and asset prices fall. The scenario features a rise in inflation, triggered by supply chain constraints and higher energy prices, caused by an escalation of geopolitical tensions.

The following table describes key macroeconomic variables assigned in the consensus Downside scenario.

Consensus Downside scenario worst outcome

	Hong Kong %	Mainland China %
GDP level (%, Start-to-trough)[1]	(1.6) (3Q25)	(1.5) (1Q24)
Unemployment rate (%, Max)[2]	4.7 (4Q25)	6.9 (4Q25)
House price index (%, Start-to-trough)[1]	(9.6) (4Q24)	(7.1) (3Q25)
Probability	10	10

1 Cumulative change to the lowest level of the series during the 20-quarter projection. For GDP growth, it is based on seasonal adjusted series.

2 The highest projected unemployment in the scenario.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

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 a further escalation of geopolitical crises globally, which creates severe supply disruptions to goods and energy markets. However, this impulse is expected to prove short-lived, as recession takes hold, causing commodity prices to correct sharply and global price inflation to fall.

The following table describes key macroeconomic variables assigned in the Downside 2 scenario.

Downside 2 scenario worst outcome

	Hong Kong %	Mainland China %
GDP level (%, Start-to-trough)[1]	(8.2) (1Q25)	(6.4) (1Q25)
Unemployment rate (%, Max)[2]	6.4 (4Q24)	7.0 (4Q25)
House price index (%, Start-to-trough)[1]	(32.8) (3Q26)	(25.5) (4Q25)
Probability	5	5

1 Cumulative change to the lowest level of the series during the 20-quarter projection. For GDP growth, it is based on seasonal adjusted series.

2 The highest projected unemployment in the scenario.

Scenario weighting

In reviewing the economic environment, the level of risk and uncertainty, management has considered both global and country specific factors.

Key considerations in the fourth quarter around uncertainty attached to the Central scenario projections focused on:

- the risk that the Israel-Hamas war escalates and affects economic expectations;
- the lagged impact of elevated interest rates on household finances and businesses and the implications of recent changes to monetary policy expectations on growth and employment; and
- the outlook for real estate in our key markets, namely Hong Kong and mainland China.

Although these risk factors remain significant, management assessed that they were adequately reflected in scenarios, at the standard weighting. It was noted that despite the escalation of geopolitical risk in the Middle East, economic forecasts had remained stable, and dispersion of forecasts around the consensus were either stable, or have moved lower. Financial market measures of volatility also remained low through the fourth quarter of 2023.

This has led management to assign scenario probabilities that are aligned to the standard scenario framework. This entailed assigning a 75% probability weighting to the Central scenario in our major markets. The consensus Upside is assigned a 10% weighting and the consensus Downside scenario is assigned 10%. The Downside 2 is assigned 5% weighting.

In support of the decision, it was noted that in mainland China recent policy announcements suggest fiscal and monetary stimulus will increase significantly through 2024. This suggests that there will be increased official support to economic headwinds, which would reduce the uncertainty attached to current forecasts.

Critical accounting estimates and judgements

The calculation of ECL under HKFRS 9 involves significant judgements, assumptions and estimates. These include:

- the selection of economic scenarios, given rapidly changing economic conditions and a wide distribution of economic forecasts; and
- estimating the economic effects of those scenarios on ECL, particularly the effect of interest and inflationary pressures in specific sectors.

How economic scenarios are reflected in the calculation of ECL

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 2023, and management judgemental adjustments were still required to support modelled outcomes.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

How economic scenarios are reflected in the calculation of ECL continued

The HSBC Group has developed a globally consistent methodology for the application of forward economic guidance into the calculation of ECL for wholesale and retail credit risk. The Group has continued to follow the HSBC Group methodology. These standard approaches are described below, followed by the management judgemental adjustments made, including those to reflect the circumstances experienced in 2023.

For our wholesale portfolios, we estimate 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 market. For LGD calculations we consider the correlation of forward economic guidance to collateral values and realisation rates for a particular market 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 forward economic guidance proportionate to the probability-weighted outcome and the Central scenario outcome for non-stage 3 populations.

For retail, the models are predominantly based on historical observations and correlations with default rates and collateral values. For PD, the impact of economic scenarios is modelled for each portfolio, leveraging historical relationships between default rates and macro-economic variables. These are included within HKFRS 9 ECL estimates using either economic response models or models which contain internal, external and macro-economic variables. The macroeconomic impact on PD is modelled over the period equal to the remaining maturity of the underlying assets. For LGD, the impact is modelled for mortgage portfolios by forecasting future loan-to-value profiles for the remaining maturity of the asset, leveraging national level house price index forecast and applying the corresponding LGD expectation relative to the updated forecast collateral values. Management judgemental adjustments are described below.

Management judgemental adjustments

In the context of HKFRS 9, management judgemental adjustments are short-term increases or decreases to the modelled ECL at either a customer, segment or portfolio level, where management believes ECL results do not sufficiently reflect the credit risk/ expected credit losses at the reporting date. These can relate to risks or uncertainties which are not reflected in the models and/ or to any late breaking events with significant uncertainty, subject to 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 effect of management judgemental adjustments are considered for balances and ECL, and will consider any changes to stage allocation where appropriate. This is in accordance with the internal adjustments framework.

Management judgemental adjustments are reviewed under the governance process for HKFRS 9 (as detailed in the section Credit risk management). Review and challenge focus on the rationale and quantum of the adjustments with further review 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.

Management judgemental adjustments made in estimating the scenario-weighted reported ECL at 31 December 2023 are set out in the following table.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

Management judgemental adjustments continued

Management judgemental adjustments to ECL[1]:

(HK$m)	Retail	Wholesale	Total
	31 December 2023		
Corporate lending adjustments	**–**	**243**	**243**
Macroeconomic-related adjustments	**271**	**–**	**271**
Other lending adjustments	**(21)**	**37**	**16**
Total	**250**	**280**	**530**

(HK$m)	Retail	Wholesale	Total
	31 December 2022 (restated)		
Corporate lending adjustments	–	1,464	1,464
Macroeconomic-related adjustments	141	–	141
Other lending adjustments	3	44	47
Total	144	1,508	1,652

1 Management judgemental adjustments presented in the table reflect increases or (decreases) to ECL, respectively.

Adjustments to corporate exposures principally reflected the outcome of management judgements for high-risk and vulnerable sectors through corporate lending adjustment in our key markets, supported by credit experts' input, quantitative analyses and benchmarks. Considerations included potential default suppression in some sectors due to continued government intervention. The corporate lending adjustments were HK$243m at 31 December 2023 (31 December 2022: HK$1,464m). The adjustment is lower than 31 December 2022 and reflects the greater alignment of the modelled ECL with management's expectation reflecting the latest macroeconomic variables forecast and the latest CRR downgrades.

In the retail portfolio, management judgement adjustments mainly relate to macroeconomic conditions and customer support programmes.

In the retail portfolio, management judgemental adjustments were an ECL increase of HK$250m at 31 December 2023 (31 December 2022: HK$144m increase).

- Macroeconomic-related adjustments increased ECL by HK$271m (31 December 2022: HK$141m increase). These adjustments were primarily in relation to risks related to future macroeconomic conditions which were not fully captured by modelled output.
- Other retail lending adjustments decreased ECL by HK$21m (31 December 2022: HK$3m increase) considering the release of addition provision with credit improvement of certain segments and other judgemental adjustments.

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.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

Economic scenarios sensitivity analysis of ECL estimates continued

The ECL calculated for the Upside and Downside scenarios should not be taken to represent the lower and upper 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 in stages 1 and 2 at the balance sheet date. The population of stage 3 loans at the balance sheet date is unchanged in these sensitivity calculations. Stage 3 ECL would only be sensitive to changes in forecasts of future economic conditions if the loss given default of a particular portfolio was sensitive to these changes.

There is a particularly high degree of estimation uncertainty in numbers representing tail risk scenarios when assigned a 100% weighting.

For wholesale credit risk exposures, the sensitivity analysis excludes ECL and financial instruments related to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios. Therefore, it is impracticable to separate the effect of macroeconomic factors in individual assessments.

For retail credit risk exposures, the sensitivity analysis includes ECL for loans and advances to customers related to defaulted obligors.

Wholesale and retail sensitivity

The wholesale and retail sensitivity analysis is stated inclusive of management judgemental adjustments, as appropriate to each scenario and scope of sensitivity. The results tables exclude portfolios held by the insurance business and small portfolios and as such cannot be directly compared to personal and wholesale lending presented in other credit risk tables. Additionally, in both the wholesale and retail analysis, the comparative period results for Downside 2 scenarios are not directly comparable to the current period, because they reflect different risk profiles relative with the Consensus scenarios for the year end.

Wholesale analysis

HKFRS 9 ECL sensitivity to future economic conditions[1,3]

ECL of financial instruments subject to significant measurement uncertainty[2]	**Hong Kong**	**Mainland China**
	31 December 2023	
Reported ECL	**2,533**	**602**
Central scenario	**2,362**	**530**
Upside scenario	**1,819**	**370**
Downside scenario	**3,317**	**896**
Downside 2 scenario	**5,412**	**1,847**

HKFRS 9 ECL sensitivity to future economic conditions[1,3]

ECL of financial instruments subject to significant measurement uncertainty[2]	Hong Kong	Mainland China
	31 December 2022	
Reported ECL	3,753	776
Central scenario	3,447	661
Upside scenario	2,515	421
Downside scenario	5,410	1,054
Downside 2 scenario	8,883	3,258

1 Excludes ECL and financial instruments on defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios.

2 Includes off-balance sheet financial instruments that are subject to significant measurement uncertainty.

3 ECL sensitivity is calculated by applying a 100% weighting to each scenario described above, and then applying judgemental overlays where determined appropriate.

(a) Credit Risk

(ii) Measurement uncertainty and sensitivity analysis of ECL estimates continued

(audited)

Wholesale and retail sensitivity continued

Retail analysis

HKFRS 9 ECL sensitivity to future economic conditions[1]

ECL of loans and advances to customers[2]	**Hong Kong**	**Mainland China**
	31 December 2023	
Reported ECL	**1,554**	**21**
Central scenario	**1,303**	**19**
Upside scenario	**1,153**	**19**
Downside scenario	**2,176**	**22**
Downside 2 scenario	**5,115**	**45**

HKFRS 9 ECL sensitivity to future economic conditions[1]

ECL of loans and advances to customers[2]	Hong Kong	Mainland China
	31 December 2022	
Reported ECL	1,284	23
Central scenario	1,112	22
Upside scenario	863	21
Downside scenario	1,987	23
Downside 2 scenario	3,211	44

1 ECL sensitivities exclude portfolios utilising less complex modelling approaches.

2 ECL sensitivity includes only on-balance sheet financial instruments to which HKFRS 9 impairment requirements are applied.

At 31 December 2023, the most significant level of ECL sensitivity was observed in Hong Kong driven by the relative size of the portfolio. Hong Kong mortgages had low levels of reported ECL due to secured nature. Credit cards and other unsecured lending are more sensitive to economic forecasts, and therefore reflected the highest level of ECL sensitivity during 2023.

(a) Credit Risk

(iii) Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers

(unaudited)

The following disclosure provides a reconciliation by stage of the Group's gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees. Movements are calculated on a year-to-date basis and therefore reflect the opening and closing position of the financial instruments.

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 CRR/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 and purchased', 'assets derecognised (including final repayments)' and 'changes to risk parameters – further lending/repayments' represent the impact from volume movements within the Group's lending portfolio.

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees

(audited)

	Non credit-impaired				Credit-impaired				Total	
	Stage 1		Stage 2		Stage 3		POCI[1]			
	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
At 1 January 2023	**1,162,085**	**(827)**	**179,597**	**(4,920)**	**23,943**	**(7,802)**	**301**	**(19)**	**1,365,926**	**(13,568)**
Transfers of financial instruments:										
– transfers from Stage 1 to Stage 2	(68,066)	97	68,066	(97)	–	–	–	–	–	–
– transfers from Stage 2 to Stage 1	26,207	(309)	(26,207)	309	–	–	–	–	–	–
– transfers to Stage 3	(1,301)	84	(8,400)	1,959	9,701	(2,043)	–	–	–	–
– transfers from Stage 3	7	(2)	41	(2)	(48)	4	–	–	–	–
Net remeasurement of ECL arising from transfer of stage	–	126	–	(194)	–	(18)	–	–	–	(86)
New financial assets originated and purchased[2]	265,973	(208)	7,699	(188)	–	–	–	–	273,672	(396)
Assets derecognised (including final repayments)	(205,674)	71	(59,207)	468	(459)	8	(114)	–	(265,454)	547
Changes to risk parameters – further lending/(repayment)	(50,316)	137	(5,610)	736	(2,866)	2,689	(70)	19	(58,862)	3,581
Changes in risk parameters – credit quality	–	22	–	(1,923)	–	(7,607)	–	–	–	(9,508)
Assets written off	–	–	–	–	(5,600)	5,600	–	–	(5,600)	5,600
Foreign exchange and others	(3,609)	11	(424)	12	(36)	11	–	–	(4,069)	34
At 31 December 2023	**1,125,306**	**(798)**	**155,555**	**(3,840)**	**24,635**	**(9,158)**	**117**	**–**	**1,305,613**	**(13,796)**

	Total
Change in ECL in income statement (charge)/release for the year	(5,862)
Add: Recoveries	229
Add/(less): Others	(580)
Total ECL (charge)/release for the year	(6,213)

(a) Credit Risk

(iii) Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers continued

(unaudited)

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees continued

(audited)

	At 31 December 2023		For the year ended 31 December 2023
	Gross carrying/ nominal amount	Allowance for ECL	ECL (charge)/ release
Placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees	1,305,613	(13,796)	(6,213)
Other financial assets measured at amortised cost	172,015	(59)	(12)
Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied	1,477,628	(13,855)	(6,225)
Debt instruments measured at FVOCI[3]	302,013	(3)	3
Performance and other guarantees	21,086	(28)	(26)
Total allowance for ECL/total consolidated income statement ECL charge for the year	1,800,727	(13,886)	(6,248)

1 Purchased or originated credit-impaired ('POCI') represented distressed restructuring.

2 Includes the new financial assets originated and purchased during the period, but subsequently transferred from stage 1 to stage 2 or stage 3 at 31 December 2023.

3 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 Consolidated Balance Sheet as it excludes fair value gains and losses.

(a) Credit Risk

(iii) Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers continued

(unaudited)

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees continued

(audited)

(restated)

	Non credit-impaired				Credit-impaired				Total	
	Stage 1		Stage 2		Stage 3		POCI[1]			
	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
At 1 January 2022	1,283,518	(822)	150,116	(3,572)	9,457	(2,700)	972	–	1,444,063	(7,094)
Transfers of financial instruments:										
– transfers from Stage 1 to Stage 2	(108,899)	208	108,899	(208)	–	–	–	–	–	–
– transfers from Stage 2 to Stage 1	17,916	(263)	(17,916)	263	–	–	–	–	–	–
– transfers to Stage 3	(2,803)	5	(16,608)	1,385	19,411	(1,390)	–	–	–	–
– transfers from Stage 3	16	(3)	23	–	(39)	3	–	–	–	–
Net remeasurement of ECL arising from transfer of stage	–	105	–	(361)	–	(18)	–	–	–	(274)
New financial assets originated and purchased[2]	316,455	(232)	18,990	(413)	199	(114)	203	(19)	335,847	(778)
Assets derecognised (including final repayments)	(475,393)	89	(53,559)	298	(1,570)	115	(764)	–	(531,286)	502
Changes to risk parameters – further lending/(repayment)	142,888	76	(9,118)	14	(2,355)	(628)	(109)	–	131,306	(538)
Changes in risk parameters – credit quality	–	8	–	(2,343)	–	(4,055)	–	–	–	(6,390)
Changes to model used for ECL calculation	–	–	–	(2)	–	–	–	–	–	(2)
Assets written off	–	–	–	–	(899)	899	–	–	(899)	899
Credit related modifications that resulted in derecognition	–	–	–	–	(155)	–	–	–	(155)	–
Foreign exchange and others	(11,613)	2	(1,230)	19	(106)	86	(1)	–	(12,950)	107
At 31 December 2022	1,162,085	(827)	179,597	(4,920)	23,943	(7,802)	301	(19)	1,365,926	(13,568)

	Total
Change in ECL in income statement (charge)/release for the year	(7,480)
Add: Recoveries	131
Add/(less): Others	(313)
Total ECL (charge)/release for the year	(7,662)

(a) Credit Risk

(iii) Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers continued

(unaudited)

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees continued

(audited)

(restated)

	At 31 December 2022		For the year ended 31 December 2022
	Gross carrying/ nominal amount	Allowance for ECL	ECL (charge)/ release
Placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees	1,365,926	(13,568)	(7,662)
Other financial assets measured at amortised cost	216,802	(47)	(34)
Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied	1,582,728	(13,615)	(7,696)
Debt instruments measured at FVOCI[3]	357,641	(6)	1
Performance and other guarantees	23,216	(2)	1
Total allowance for ECL / consolidated income statement ECL charge for the year	1,963,585	(13,623)	(7,694)

1 Purchased or originated credit-impaired ('POCI') represented distressed restructuring .

2 Includes the new financial assets originated and purchased during the period, but subsequently transferred from stage 1 to stage 2 or stage 3 at 31 December 2022.

3 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 Consolidated Balance Sheet as it excludes fair value gains and losses.

(iv) Credit quality of financial instruments

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 the probability of default of financial instruments, whereas HKFRS 9 stages 1 and 2 are determined based on relative deterioration of credit quality since initial recognition. Accordingly, for non-credit impaired financial instruments, there is no direct relationship between the credit quality assessments and HKFRS 9 stages 1 and 2, though typically the lowered credit quality bands exhibit a higher proportion in stage 2.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Distribution of financial instruments by credit quality at 31 December 2023

(audited)

	Gross carrying/notional amount[3]							
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total	Allowance for ECL	Net
In-scope for HKFRS 9 impairment								
Loans and advances to customers at amortised cost	463,501	135,307	215,875	34,607	24,749	874,039	(13,633)	860,406
– personal	365,758	15,348	16,851	1,121	829	399,907	(1,706)	398,201
– corporate and commercial	83,473	114,959	188,015	33,486	23,920	443,853	(11,885)	431,968
– non-bank financial institutions	14,270	5,000	11,009	–	–	30,279	(42)	30,237
Placings with and advances to banks at amortised cost	83,476	258	26	–	–	83,760	(4)	83,756
Cash and balances at central banks	10,564	–	–	–	–	10,564	–	10,564
Reverse repurchase agreements – non-trading	24,062	6,140	–	–	–	30,202	–	30,202
Financial investments measured at amortised cost	100,060	392	–	–	–	100,452	(14)	100,438
Other assets	18,387	5,950	6,174	216	70	30,797	(45)	30,752
Debt instruments measured at fair value through other comprehensive income[1]	302,011	2	–	–	–	302,013	(3)	302,010
	1,002,061	148,049	222,075	34,823	24,819	1,431,827	(13,699)	1,418,128
Out-of-scope for HKFRS 9 impairment								
Trading assets	43,679	113	189	–	4	43,985	–	43,985
Other financial assets mandatorily measured at fair value through profit or loss	91,144	26,127	2,468	–	45	119,784	–	119,784
Derivative financial instruments	14,502	289	110	58	–	14,959	–	14,959
	149,325	26,529	2,767	58	49	178,728	–	178,728
	1,151,386	174,578	224,842	34,881	24,868	1,610,555	(13,699)	1,596,856
Percentage of total credit quality	71%	11%	14%	2%	2%	100%		
Loan and other credit related commitments[2]	250,585	51,099	43,362	883	3	345,932	(155)	345,777
Financial guarantee and similar contracts[2]	444	797	509	132	–	1,882	(4)	1,878

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 Consolidated Balance Sheet as it excludes fair value gains and losses.

2 Figures do not include commitments and financial guarantee contracts not subject to impairment requirements under HKFRS 9. As such, the amounts do not agree with the figures shown in note 43 on the Consolidated Financial Statements.

3 For financial assets under 'In-scope for HKFRS 9 impairment', gross carrying amount is disclosed; for financial assets under 'Out-of-scope for HKFRS 9 impairment', carrying amount (i.e. fair value) is disclosed; for off-balance credit commitments, notional amount is disclosed.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Distribution of financial instruments by credit quality at 31 December 2022

(audited)

(restated)

	Gross carrying/notional amount[3]							
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total	Allowance for ECL	Net
In-scope for HKFRS 9 impairment								
Loans and advances to customers at amortised cost	457,044	167,123	256,457	39,892	24,212	944,728	(13,394)	931,334
– personal	353,312	16,917	11,172	416	923	382,740	(1,373)	381,367
– corporate and commercial	95,808	143,049	226,674	39,476	23,289	528,296	(11,885)	516,411
– non-bank financial institutions	7,924	7,157	18,611	–	–	33,692	(136)	33,556
Placings with and advances to banks at amortised cost	61,975	203	28	–	–	62,206	(3)	62,203
Cash and balances at central banks	17,612	–	–	–	–	17,612	(3)	17,609
Reverse repurchase agreements – non-trading	38,438	3,926	–	–	–	42,364	–	42,364
Financial investments measured at amortised cost	119,284	437	–	–	–	119,721	(14)	119,707
Other assets	21,706	8,276	7,036	87	–	37,105	(30)	37,075
Debt instruments measured at fair value through other comprehensive income[1]	357,407	234	–	–	–	357,641	(6)	357,635
	1,073,466	180,199	263,521	39,979	24,212	1,581,377	(13,450)	1,567,927
Out-of-scope for HKFRS 9 impairment								
Trading assets	46,936	126	268	–	–	47,330	–	47,330
Other financial assets mandatorily measured at fair value through profit or loss	96,605	26,347	2,010	–	–	124,962	–	124,962
Derivative financial instruments	22,183	470	18	90	–	22,761	–	22,761
	165,724	26,943	2,296	90	–	195,053	–	195,053
	1,239,190	207,142	265,817	40,069	24,212	1,776,430	(13,450)	1,762,980
Percentage of total credit quality	70%	12%	15%	2%	1%	100%		
Loan and other credit related commitments[2]	263,697	53,415	38,414	1,711	28	357,265	(169)	357,096
Financial guarantee and similar contracts[2]	399	627	556	141	4	1,727	(2)	1,725

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 Consolidated Balance Sheet as it excludes fair value gains and losses.

2 Figures do not include commitments and financial guarantee contracts not subject to impairment requirements under HKFRS 9. As such, the amounts do not agree with the figures shown in note 43 on the Consolidated Financial Statements.

3 For financial assets under 'In-scope for HKFRS 9 impairment', gross carrying amount is disclosed; for financial assets under 'Out-of-scope for HKFRS 9 impairment', carrying amount (i.e. fair value) is disclosed; for off-balance credit commitments, notional amount is disclosed.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Distribution of financial instruments to which the impairment requirements in HKFRS 9 are applied, by credit quality and stage distribution at 31 December 2023

(audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total	Allowance for ECL	Net
Loans and advances to customers at amortised cost	463,501	135,307	215,875	34,607	24,749	874,039	(13,633)	860,406
– stage 1	460,946	120,509	130,717	1,352	–	713,524	(709)	712,815
– stage 2	2,555	14,798	85,158	33,255	–	135,766	(3,766)	132,000
– stage 3	–	–	–	–	24,632	24,632	(9,158)	15,474
– POCI	–	–	–	–	117	117	–	117
Placings with and advances to banks at amortised cost	83,476	258	26	–	–	83,760	(4)	83,756
– stage 1	83,440	241	26	–	–	83,707	(4)	83,703
– stage 2	36	17	–	–	–	53	–	53
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
Other financial assets measured at amortised cost	153,073	12,482	6,174	216	70	172,015	(59)	171,956
– stage 1	153,066	12,145	5,077	–	–	170,288	(41)	170,247
– stage 2	7	337	1,097	216	–	1,657	(3)	1,654
– stage 3	–	–	–	–	70	70	(15)	55
– POCI	–	–	–	–	–	–	–	–
Loan and other credit-related commitments[2]	250,585	51,099	43,362	883	3	345,932	(155)	345,777
– stage 1	250,131	44,382	32,225	97	–	326,835	(84)	326,751
– stage 2	454	6,717	11,137	786	–	19,094	(71)	19,023
– stage 3	–	–	–	–	3	3	–	3
– POCI	–	–	–	–	–	–	–	–
Financial guarantees and similar contracts[2]	444	797	509	132	–	1,882	(4)	1,878
– stage 1	444	604	191	1	–	1,240	(1)	1,239
– stage 2	–	193	318	131	–	642	(3)	639
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
	951,079	199,943	265,946	35,838	24,822	1,477,628	(13,855)	1,463,773
Debt instruments at FVOCI[1]								
– stage 1	302,011	2	–	–	–	302,013	(3)	302,010
– stage 2	–	–	–	–	–	–	–	–
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
	302,011	2	–	–	–	302,013	(3)	302,010

[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 Consolidated Balance Sheet as it excludes fair value gains and losses.

[2] Figures do not include commitments and financial guarantee contracts not subject to impairment requirements under HKFRS 9. As such, the amounts do not agree with the figures shown in note 43 on the Consolidated Financial Statements.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Distribution of financial instruments to which the impairment requirements in HKFRS 9 are applied, by credit quality and stage distribution at 31 December 2022

(audited)

(restated)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total	Allowance for ECL	Net
Loans and advances to customers at amortised cost	457,044	167,123	256,457	39,892	24,212	944,728	(13,394)	931,334
– stage 1	453,000	148,598	156,787	1,257	–	759,642	(755)	758,887
– stage 2	4,044	18,525	99,670	38,635	–	160,874	(4,818)	156,056
– stage 3	–	–	–	–	23,911	23,911	(7,802)	16,109
– POCI	–	–	–	–	301	301	(19)	282
Placings with and advances to banks at amortised cost	61,975	203	28	–	–	62,206	(3)	62,203
– stage 1	61,854	158	–	–	–	62,012	(2)	62,010
– stage 2	121	45	28	–	–	194	(1)	193
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
Other financial assets measured at amortised cost	197,040	12,639	7,036	87	–	216,802	(47)	216,755
– stage 1	196,852	12,533	6,196	10	–	215,591	(38)	215,553
– stage 2	188	106	840	77	–	1,211	(9)	1,202
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
Loan and other credit-related commitments[2]	263,697	53,415	38,414	1,711	28	357,265	(169)	357,096
– stage 1	262,015	46,581	30,460	346	–	339,402	(70)	339,332
– stage 2	1,682	6,834	7,954	1,365	–	17,835	(99)	17,736
– stage 3	–	–	–	–	28	28	–	28
– POCI	–	–	–	–	–	–	–	–
Financial guarantees and similar contracts[2]	399	627	556	141	4	1,727	(2)	1,725
– stage 1	399	502	128	–	–	1,029	–	1,029
– stage 2	–	125	428	141	–	694	(2)	692
– stage 3	–	–	–	–	4	4	–	4
– POCI	–	–	–	–	–	–	–	–
	980,155	234,007	302,491	41,831	24,244	1,582,728	(13,615)	1,569,113
Debt instruments at FVOCI[1]								
– stage 1	357,407	234	–	–	–	357,641	(6)	357,635
– stage 2	–	–	–	–	–	–	–	–
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
	357,407	234	–	–	–	357,641	(6)	357,635

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 Consolidated Balance Sheet as it excludes fair value gains and losses.

2 Figures do not include commitments and financial guarantee contracts not subject to impairment requirements under HKFRS 9. As such, the amounts do not agree with the figures shown in note 43 on the Consolidated Financial Statements.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Mainland China Commercial Real Estate

(unaudited)

The following table presents the Group's total exposure to borrowers classified in the mainland China commercial real estate ('CRE') sector where the ultimate parent is based in mainland China, as well as all CRE exposures booked on mainland China balance sheets. The exposures at 31 December 2023 are split by country/territory and credit quality including allowances for ECL by stage.

	At 31 December 2023		
	Hong Kong	Mainland China	Total
Loans and advances to customers[1]	22,453	12,041	34,494
Guarantees issued and others[2]	205	–	205
Total mainland China CRE exposure	22,658	12,041	34,699
Distribution of mainland China CRE exposure by credit quality			
– Strong	1,151	392	1,543
– Good	1,807	3,157	4,964
– Satisfactory	2,690	6,276	8,966
– Sub–standard	4,169	683	4,852
– Credit–impaired	12,841	1,533	14,374
	22,658	12,041	34,699
Allowance for ECL by credit quality			
– Strong	–	1	1
– Good	1	17	18
– Satisfactory	14	66	80
– Sub–standard	224	239	463
– Credit–impaired	6,407	479	6,886
	6,646	802	7,448
Allowance for ECL by stage			
– Stage 1	2	47	49
– Stage 2	237	276	513
– Stage 3	6,407	479	6,886
	6,646	802	7,448
ECL coverage %	29.3	6.7	21.5

[1] Amounts represent gross carrying amount.

[2] Amounts represent nominal amount.

(a) Credit Risk

(iv) Credit quality of financial instruments continued

Mainland China Commercial Real Estate continued

(unaudited)

	At 31 December 2022		
	Hong Kong	Mainland China	Total
Loans and advances to customers[1]	37,524	11,821	49,345
Guarantees issued and others[2]	180	2,379	2,559
Total mainland China CRE exposure	37,704	14,200	51,904
Distribution of mainland China CRE exposure by credit quality			
– Strong	3,307	2,304	5,611
– Good	2,300	3,076	5,376
– Satisfactory	5,429	6,888	12,317
– Sub-standard	11,834	952	12,786
– Credit-impaired	14,834	980	15,814
	37,704	14,200	51,904
Allowance for ECL by credit quality			
– Strong	–	4	4
– Good	1	14	15
– Satisfactory	13	80	93
– Sub-standard	1,987	247	2,234
– Credit-impaired	4,973	578	5,551
	6,974	923	7,897
Allowance for ECL by stage			
– Stage 1	4	30	34
– Stage 2	1,997	315	2,312
– Stage 3	4,973	578	5,551
	6,974	923	7,897
ECL coverage %	18.5	6.5	15.2

1 Amounts represent gross carrying amount.

2 Amounts represent nominal amount.

(a) Credit Risk

(iv) Credit quality of financial instruments

continued

Mainland China Commercial Real Estate continued

(unaudited)

CRE financing refers to lending that focuses on commercial development and investment in real estate, and covers commercial, residential and industrial assets. The exposures in the table are related to companies whose primary activities are focused on these activities. Lending is generally focused on tier 1 and 2 cities. The table also includes financing provided to a corporate or financial entity for the purchase or financing of a property which supports the overall operations of the business. Such exposures are outside of our normal definition of Commercial Real Estate, as applied elsewhere in this report, but are provided here for a more comprehensive view of our mainland property exposure.

The table above shows 45% of total exposure with a credit quality of 'satisfactory' or above, which was unchanged compared with 31 December 2022.

Total 'credit impaired' exposures increased to 41% of total exposure (31 December 2022: 30%) at HK$14,374m (31 December 2022: HK$15,814m), reflecting sustained stress in the China commercial real estate market, including weakness in both property market fundamentals and financing conditions for borrowers operating in this sector.

Allowances for ECL are substantially against unsecured exposures. For secured exposures, allowances for ECL are minimal, reflecting the nature and value of the security held.

Facilities booked in Hong Kong continued to represent the largest proportion of mainland China commercial real estate exposures, although total exposures reduced to HK$22,658m, down HK$15,046m since 31 December 2022, as a result of de-risking measures, repayments and write-offs. This portfolio remains relatively higher risk, with 25% (31 December 2022: 29%) of exposure booked with a credit quality of 'satisfactory' or above and 57% 'credit impaired' (31 December 2022: 39%). At 31 December 2023, the Group had allowances for ECL of HK$6,646m (31 December 2022: HK$6,974m) held against mainland China commercial real estate exposures booked in Hong Kong. ECL coverage increased to 29% (31 December 2022: 18%), reflecting a further credit deterioration during the year.

In the Hong Kong portfolio, approximately 40% of the unimpaired exposure is lending to state-owned enterprises and relatively strong private-owned enterprises. This is reflected in the relatively low ECL allowance in this part of the portfolio.

Market conditions are likely to remain subdued with a protracted recovery as sentiment and domestic residential demand remain weak, with ongoing refinancing and liquidity risk for corporates operating in this market. The divergence between Privately Owned Enterprises ('POE') and State Owned Enterprises ('SOE') is likely to continue, with SOEs achieving above market sales performance and benefitting from market share gains and better access to funding.

(v) 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 their cash flow resources rather than rely on the value of security offered. Depending on the customer's standing and the type of product, facilities may be provided unsecured. However, for certain lending decisions a charge over collateral is usually obtained, and is important for the credit decision and pricing, and it is the Group's practice to obtain that collateral and sell it in the event of default as a source of repayment.

Such collateral has a significant financial effect in mitigating our exposure to credit risk and the objective of the disclosure below is to quantify these forms. We may also manage our risk by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees, but the valuation of such mitigants is less certain and their financial effect has not been quantified in the loans shown below.

We have quantified below the value of fixed charges we hold over a specific asset (or assets) of a borrower for which we have a practical ability and history of enforcing in satisfying a debt in the event of a borrower failing to meet their contractual obligations and where the asset is cash or can be realised in the form of cash by sale in an established market.

Personal lending

(audited)

For personal lending, the collateral held has been analysed below separately for residential mortgages and other personal lending due to the different nature of collateral held on the portfolios.

(a) Credit Risk

(v) Collateral and other credit enhancements continued

(audited)

Residential mortgages

(audited)

The following table shows residential mortgage lending including off-balance sheet loan commitments by level of collateralisation.

Residential mortgages including loan commitments by level of collateral

	At 31 December 2023			At 31 December 2022		
	Gross carrying/ nominal amount	ECL	ECL coverage %	Gross carrying/ nominal amount	ECL	ECL coverage %
Stage 1						
Fully collateralised	293,293	(4)	0.00	291,992	(4)	0.00
LTV ratio:						
– Less than 70%	216,125	(4)	0.00	228,553	(4)	0.00
– 71% to 90%	39,790	–	–	32,766	–	–
– 91% to 100%	37,378	–	–	30,673	–	–
Partially collateralised (A)	28,796	(1)	0.00	20,819	–	–
Total	322,089	(5)	0.00	312,811	(4)	0.00
– *Collateral value on A*	27,519			19,978		
Stage 2						
Fully collateralised	8,322	–	–	4,718	–	–
LTV ratio:						
– Less than 70%	7,412	–	–	4,194	–	–
– 71% to 90%	543	–	–	344	–	–
– 91% to 100%	367	–	–	180	–	–
Partially collateralised (B)	347	–	–	187	–	–
Total	8,669	–	–	4,905	–	–
– *Collateral value on B*	327			180		
Stage 3						
Fully collateralised	558	(16)	2.87	505	(17)	3.37
LTV ratio:						
– Less than 70%	509	(15)	2.95	485	(17)	3.51
– 71% to 90%	35	(1)	2.86	20	–	–
– 91% to 100%	14	–	–	–	–	–
Partially collateralised (C)	22	(1)	4.55	–	–	–
Total	580	(17)	2.93	505	(17)	3.37
– *Collateral value on C*	20			–		
	331,338	(22)	0.01	318,221	(21)	0.01

The ECL coverage represents the actual ECL divided by gross carrying/nominal amount.

The collateral included in the table above consists of fixed first charges on residential real estate.

(a) Credit Risk

(v) Collateral and other credit enhancements

continued

(audited)

Residential mortgages continued

(audited)

The loan-to-value ('LTV') ratio in the table above is calculated as the gross on-balance sheet carrying amount of the loan and any off-balance sheet loan commitment at the balance sheet date as a percentage of the current value of collateral. The current value of collateral is determined through a combination of professional valuations, physical inspections or house price indices. Valuations are updated on a regular basis and more frequently when market conditions or portfolio performance are subject to significant change or where a loan is identified and assessed as impaired. The collateral valuation excludes any adjustments for obtaining and selling the collateral.

Other personal lending

(audited)

Other personal lending consists primarily of personal loans, overdrafts and credit cards, all of which are generally unsecured, except lending to private banking customers which are generally secured.

Corporate and commercial and financial (non-bank) lending

(audited)

For corporate and commercial and financial (non-bank) lending, the collateral held has been analysed below separately for commercial real estate and other corporate and commercial and financial (non-bank) lending due to the different nature of collateral held on the portfolios.

Commercial real estate

(audited)

Commercial real estate lending includes the financing of corporate and institutional customers who are investing primarily in income-producing assets and, to a lesser extent, in their construction and development.

(a) Credit Risk

(v) Collateral and other credit enhancements continued

(audited)

Commercial real estate continued

(audited)

The following table shows commercial real estate lending including off-balance sheet loan commitments by level of collateralisation.

	At 31 December 2023			At 31 December 2022		
	Gross carrying/ nominal amount	ECL	ECL coverage %	Gross carrying/ nominal amount	ECL	ECL coverage %
Stage 1						
Not collateralised	**50,544**	**(14)**	**0.03**	62,767	(17)	0.03
Fully collateralised	**64,453**	**(70)**	**0.11**	92,736	(72)	0.08
Partially collateralised (A)	**12,270**	**(6)**	**0.05**	4,789	–	–
Total	**127,267**	**(90)**	**0.07**	160,292	(89)	0.06
– *Collateral value on A*	**11,641**			4,099		
Stage 2						
Not collateralised	**9,134**	**(745)**	**8.16**	17,384	(2,010)	11.56
Fully collateralised	**49,472**	**(842)**	**1.70**	42,635	(661)	1.55
Partially collateralised (B)	**4,792**	**(38)**	**0.79**	2,881	(87)	3.02
Total	**63,398**	**(1,625)**	**2.56**	62,900	(2,758)	4.38
– *Collateral value on B*	**4,102**			1,810		
Stage 3						
Not collateralised	**8,109**	**(6,181)**	**76.22**	8,497	(4,642)	54.63
Fully collateralised	**5,059**	**(630)**	**12.45**	5,857	(881)	15.04
Partially collateralised (C)	**221**	**(84)**	**38.01**	310	(47)	15.16
Total	**13,389**	**(6,895)**	**51.50**	14,664	(5,570)	37.98
– *Collateral value on C*	**200**			298		
POCI						
Not collateralised	**–**	**–**	**–**	–	–	–
Fully collateralised	**–**	**–**	**–**	–	–	–
Partially collateralised (D)	**117**	**–**	**–**	145	–	–
Total	**117**	**–**	**–**	145	–	–
– *Collateral value on D*	**65**			65		
	204,171	**(8,610)**	**4.22**	238,001	(8,417)	3.54

The collateral included in the table above consists of fixed first charges on real estate and charges over cash for the commercial real estate sector. The table includes lending to major property developers which is typically secured by guarantees or is unsecured.

(a) Credit Risk

(v) Collateral and other credit enhancements

continued

(audited)

Commercial real estate continued

(audited)

The value of commercial real estate collateral is determined through a combination of professional and internal valuations and physical inspection. Due to the complexity of collateral valuations for commercial real estate, local valuation policies determine the frequency of review based on local market conditions. Revaluations are sought with greater frequency where, as part of the regular credit assessment of the obligor, material concerns arise in relation to the transaction which may reflect on the underlying performance of the collateral, or in circumstances where an obligor's credit quality has declined sufficiently to cause concern that the principal payment source may not fully meet the obligation (i.e. the obligor's credit quality classification indicates it is at the lower end e.g. sub-standard, or approaching impaired).

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.

Other corporate and commercial and financial (non-bank) lending

(audited)

The following table shows corporate, commercial and financial (non-bank) lending including off-balance sheet loan commitments by level of collateralisation.

	At 31 December 2023			At 31 December 2022		
	Gross carrying/ nominal amount	ECL	ECL coverage %	Gross carrying/ nominal amount	ECL	ECL coverage %
Stage 1						
Not collateralised	284,386	(222)	0.08	282,001	(317)	0.11
Fully collateralised	87,126	(110)	0.13	120,657	(170)	0.14
Partially collateralised (A)	33,211	(30)	0.09	41,339	(42)	0.10
Total	404,723	(362)	0.09	443,997	(529)	0.12
– *Collateral value on A*	14,725			18,852		
Stage 2						
Not collateralised	40,792	(182)	0.45	45,063	(240)	0.53
Fully collateralised	46,230	(711)	1.54	69,599	(740)	1.06
Partially collateralised (B)	11,258	(100)	0.89	16,620	(150)	0.90
Total	98,280	(993)	1.01	131,282	(1,130)	0.86
– *Collateral value on B*	5,954			8,111		
Stage 3						
Not collateralised	1,730	(900)	52.02	1,916	(1,112)	58.04
Fully collateralised	5,290	(380)	7.18	3,231	(154)	4.77
Partially collateralised (C)	3,394	(833)	24.54	3,200	(825)	25.78
Total	10,414	(2,113)	20.29	8,347	(2,091)	25.05
– *Collateral value on C*	1,617			1,879		
POCI						
Not collateralised	–	–	–	–	–	–
Fully collateralised	–	–	–	–	–	–
Partially collateralised (D)	–	–	–	156	(19)	12.18
Total	–	–	–	156	(19)	12.18
– *Collateral value on D*	–			125		
	513,417	(3,468)	0.68	583,782	(3,769)	0.65

(a) Credit Risk

(v) Collateral and other credit enhancements

continued

(audited)

Other corporate and commercial and financial (non-bank) lending continued

(audited)

The collateral used in the assessment of the above primarily includes first legal charges over real estate and charges over cash in the commercial and industrial sector and charges over cash and marketable financial instruments in the financial sector.

It should be noted that the table above excludes other types of collateral which are commonly taken for corporate and commercial lending such as unsupported guarantees and floating charges over the assets of a customer's business. While such mitigants have value, often providing rights in insolvency, their assignable value is insufficiently certain. They are assigned no value for disclosure purposes.

As with commercial real estate the value of real estate collateral included in the table above is generally determined through a combination of professional and internal valuations and physical inspection. The frequency of revaluation is undertaken on a similar basis to commercial real estate loans and advances; however, for financing activities in corporate and commercial lending that are not predominantly commercial real estate-oriented, collateral value is not as strongly correlated to principal repayment performance. Collateral values will generally be refreshed when an obligor's general credit performance deteriorates and it is necessary to assess the likely performance of secondary sources of repayment should reliance upon them prove necessary. For the purposes of the table above, cash is valued at its nominal value and marketable securities at their fair value.

Placings with and advances to banks

(audited)

Placings with and advances to banks are typically unsecured. At 31 December 2023, HK$83,756m (2022: HK$62,203m) of placings with and advances to banks rated CRR 1 to 5, including loan commitments, are uncollateralised.

Derivatives

(audited)

The ISDA Master Agreement is our preferred agreement for documenting derivatives activity. It provides the contractual framework within which dealing activity across a full range of over-the-counter ('OTC') products is conducted, and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or another pre-agreed termination event occurs. It is common, and the Group's preferred practice, for the parties 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. Please refer to note 45 'Offsetting of financial assets and financial liabilities' for further details.

Other credit risk exposures

(audited)

In addition to collateralised lending described above, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are described in more detail below.

Government, bank and other financial institution-issued securities may benefit from additional credit enhancement, notably through government guarantees that reference these assets. Corporate-issued debt securities are primarily unsecured. Debt securities issued by banks and financial institutions include asset-backed securities ('ABS') and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABS is reduced through the purchase of credit default swap ('CDS') protection.

The Group's maximum exposure to credit risk includes financial guarantees and similar arrangements that it issues or enters into, and loan commitments to which it is irrevocably committed. Depending on the terms of the arrangement, the Group may have recourse to additional credit mitigation in the event that a guarantee is called upon or a loan commitment is drawn and subsequently defaults. The risks and exposures from these are captured and managed in accordance with the Group's overall credit risk management policies and procedures.

Collateral and other credit enhancements obtained

(audited)

The Group obtained assets by taking possession of collateral held as security, or calling other credit enhancement. The nature of these assets held as at 31 December 2023 are residential properties with carrying amount of HK$118m (2022: residential properties of HK$87m) and vehicle of HK$1m (2022: nil).

(b) Treasury Risk

Overview

(unaudited)

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

(unaudited)

Main objective in the management of treasury risk is to maintain appropriate levels of capital, liquidity, funding, foreign exchange and market risk to support business strategy, and meet regulatory and stress testing-related requirements.

The 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.

Treasury risk management

Key developments in 2023

(unaudited)

- The implementation of hold-to-collect business model has been completed, which involves our portfolio of hold-to-collect assets forming a material part of the liquid asset buffer as well as a hedge to our structural interest rate risk. This allows us more flexibility in managing the hold-to-collect-and-sell portfolio to optimise returns from market movements while safeguarding capital and future earnings.
- Following high-profile US and Swiss banking failures in the first quarter of 2023, the existing risk management practices including stress testing and limit setting were validated. Additionally, liquidity monitoring and metric assumptions as part of the internal liquidity adequacy assessment process ('ILAAP') cycle were reviewed to ensure they continued to cover observed and emerging risks.
- Continued to improve our analysis and understanding of the drivers of capital volatility and the underlying sensitivities, ensuring these are actively considered in our risk appetite and limit setting processes.
- Continued to increase the stabilisation of our net interest income ('NII') as interest rate expectations fluctuated, driven by central bank rate increases and a reassessment of the trajectory of inflation in major economies.

Governance and structure

(unaudited)

The Board approves the policy and risk appetite for capital risk, liquidity and funding risk, and IRRBB. It is supported and advised by the RC.

The Asset, Liability and Capital Management ('ALCM') team actively manages capital, liquidity risk and funding risk and structural foreign exchange risk on an on-going basis and provides support to the Asset and Liability Management Committee ('ALCO') with risk appetites overseen by the Risk Management Meeting ('RMM'). Markets Treasury has the responsibility for cash and liquidity management.

The ALCM team further manages interest rate risk in the non-trading banking book, maintaining the transfer pricing framework and informing the ALCO the overall banking book interest rate exposure. Banking book interest rate positions may be transferred to be managed by Markets Treasury, within the market risk limits approved by the RMM.

Treasury Risk Management function carries out independent review, challenge and assurance of the appropriateness of the capital, liquidity and IRRBB risk management activities undertaken by ALCM and Markets Treasury.

Internal Audit provides independent assurance that risk is managed effectively.

(b) Treasury Risk

Capital Risk

Overview

(audited)

The Group's objective for managing capital is to maintain a strong capital base to support the development of its business and to meet regulatory capital requirements at all times. The Group recognises the impact of different level of equity capital on shareholder returns and seeks to maintain a prudent balance between advantages and flexibility provided by a strong capital position and higher returns on equity through greater leverage.

Framework

The policy on capital management sets out the Group's capital management framework. The framework sets out our approach to determining key capital risk appetites for Common Equity Tier 1 ('CET1'), Tier 1 ('T1'), Total capital, loss-absorbing capacity ('LAC') and leverage ratio, which enables us to manage our capital in a consistent manner. Regulatory capital and economic capital are the two primary measures used for the management and control of capital.

Capital measures:

- regulatory capital is the capital which we are required to hold in accordance with the rules established by regulator; and
- economic capital is the internally calculated capital requirement to support risks to which the Group is exposed to and forms a core part of the internal capital adequacy assessment process ('ICAAP').

ICAAP is an assessment of the Group's capital position, outlining both regulatory and internal capital resources and requirements resulting from our business model, strategy, risk profile, performance and planning, and the implications of stress testing. ICAAP is driven by an assessment of risks, including credit, market, operational, pensions, insurance, structural foreign exchange, interest rate risk in the banking book. Climate risk is also considered as part of the ICAAP, and the Group is continuing to develop the approach for climate risk management. The ICAAP supports the determination of the capital risk appetites, as well as enables the assessment and determination of capital requirements by regulator.

An annual Group capital plan is prepared and approved by the Board with the objectives of maintaining an optimal amount of capital and a suitable mix between different components of capital. The Group manages its own capital within the context of the approved annual capital plan, which determines the level of risk-weighted asset ('RWA') growth as well as the optimal amount and components of capital required to support planned business growth. Capital and RWA are monitored and managed against the plan, with capital forecasts reported to relevant governance committees. As part of the Group's capital management objectives, subsidiary with capital generated in excess of planned requirement will return to the Bank, normally by way of dividends. The Group also raised subordinated debt in accordance with HSBC Group's guidelines regarding market and investor concentration, cost, market conditions, timing and maturity profile.

The Bank is primarily a provider of equity capital to its subsidiaries. These investments are substantially funded by the Bank's own capital and profit. The Bank seeks to maintain a prudent balance between the composition of its capital and that of its investment in subsidiaries.

The principal forms of capital are included in the following balances on the Consolidated Balance Sheet: share capital, retained profits, other equity instruments and other reserves. Capital also includes impairment allowances and regulatory reserve for general banking risks as allowed under Banking (Capital) Rules.

Externally imposed capital requirements

(audited)

The HKMA supervises the Group on a consolidated and solo-consolidated basis and, as such, receives information on the capital adequacy of, and sets capital requirements for, the Group as a whole. Individual banking subsidiaries are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements. Certain non-banking financial subsidiaries are also subject to the supervision and capital requirements of local regulatory authorities.

(b) Treasury Risk

Capital Risk continued

Externally imposed capital requirements continued

(audited)

The Group uses the advanced internal ratings-based ('IRB') approach to calculate its credit risk for the majority of its non-securitisation exposures. For collective investment scheme exposures, the Group uses the look-through approach to calculate the risk-weighted amount. For counterparty credit risk, the Group uses standardised (counterparty credit risk) approach to calculate its default risk exposures for derivatives, and the comprehensive approach for securities financing transactions. For market risk, the Group uses an internal models approach to calculate its general market risk for the risk categories of interest rate and foreign exchange (including gold) exposures and the standardised (market risk) approach for calculating other market risk positions. For operational risk, the Group uses the standardised (operational risk) approach to calculate its operational risk.

During the year, the Group complied with all of the externally imposed capital requirements by the HKMA.

Basel III

(unaudited)

The Basel III capital rules set out the minimum CET1 capital requirement of 4.5% and total capital requirement of 8%.

At 31 December 2023, the capital buffers applicable to the Group include the Capital Conservation Buffer ('CCB'), the Countercyclical Capital Buffer ('CCyB') and the Higher Loss Absorbency ('HLA') requirements for Domestic Systemically Important Banks ('D-SIB'). The CCB is 2.5% and is designed to ensure banks build up capital outside periods of stress. The CCyB is set on an individual country/territory basis and is built up during periods of excess credit growth to protect against future losses. The CCyB for Hong Kong and the list of D-SIB are regularly reviewed and last announced by the HKMA on 3 November 2023 and 29 December 2023 respectively. In its latest announcement, the HKMA maintained the CCyB for Hong Kong at 1.0% and maintained the D-SIB designation as well as HLA requirement at 1.0% for the Group.

Loss-absorbing capacity requirements

(unaudited)

The HKMA classified the Bank as a material subsidiary of HSBC's Asian resolution group in 2019 and required the Bank to comply with internal loss-absorbing capacity requirements under the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules.

Leverage ratio

(unaudited)

The leverage ratio was introduced into the Basel III framework as a non-risk-based backstop limit, to supplement risk-based capital requirements. It aims to constrain the build-up of excess leverage in the banking sector, introducing additional safeguards against model risk and measurement errors. The ratio is a volume-based measure calculated as Tier 1 capital divided by total on-balance sheet and off-balance sheet exposures. The minimum leverage ratio requirement in Hong Kong is 3%.

Capital base

(unaudited)

The following tables show the capital base, RWAs and capital ratios as contained in the 'Capital Adequacy Ratio' return required to be submitted to the HKMA by the Bank on consolidated basis as specified by the HKMA under the requirements of section 3C(1) of the Banking (Capital) Rules. The basis is different from that for accounting purposes. Further information on the regulatory consolidation basis is set out in the Banking Disclosure Statement that is available in the Regulatory Disclosures section of our website www.hangseng.com.

The Bank and its subsidiaries may need to maintain a regulatory reserve to satisfy the provisions of the Banking Ordinance and local regulatory requirements for prudential supervision purposes. At 31 December 2023, the Group is not required to restrict any reserves which can be distributed to shareholders (31 December 2022: nil) as the impairment allowance for Stage 1 and 2 loans and advances to customers exceeded the required regulatory reserve balance.

We closely monitor and consider future regulatory change and continue to evaluate the impact upon our capital requirements of regulatory developments. This includes the Basel III final reform package, which is scheduled for implementation by the HKMA on 1 January 2025. We continue to monitor progress on the implementation. Based on the results of the final HKMA rules, we foresee a positive impact on our capital ratios on initial application. The RWA output floor under the Basel III final reform package will be phased in over five years from initial implementation. Any impact from the output floor would be towards the end of the phase in period.

(b) Treasury Risk

Capital Risk continued

Capital base continued

(unaudited)

The following table sets out the composition of the Group's capital base under Basel III at 31 December 2023 and 31 December 2022. A more detailed breakdown of the capital position and a full reconciliation between the Group's accounting and regulatory balance sheets can be viewed in the Banking Disclosure Statement in the Regulatory Disclosures section of our website www.hangseng.com.

	2023	2022 (restated)
CET1 Capital		
Shareholders' equity	151,744	143,883
– Shareholders' equity per balance sheet	168,131	159,933
– Additional Tier 1 ('AT1') perpetual capital instruments	(11,744)	(11,744)
– Unconsolidated subsidiaries	(4,643)	(4,306)
Non-controlling interests	–	–
– Non-controlling interests per balance sheet	53	65
– Non-controlling interests in unconsolidated subsidiaries	(53)	(65)
Regulatory deductions to CET1 capital	(29,485)	(27,461)
– Cash flow hedge reserve	37	472
– Changes in own credit risk on fair valued liabilities	(4)	(6)
– Property revaluation reserves[1]	(24,570)	(24,418)
– Intangible assets	(3,388)	(3,011)
– Deferred tax assets net of deferred tax liabilities	(481)	(346)
– Valuation adjustments	(153)	(152)
– Excess of total expected loss amount over total eligible provisions under the IRB approach	(926)	–
Total CET1 Capital	122,259	116,422
AT1 Capital		
Total AT1 capital before and after regulatory deductions	11,744	11,744
– Perpetual capital instruments	11,744	11,744
Total AT1 Capital	11,744	11,744
Total T1 Capital	134,003	128,166
Tier 2 ('T2') Capital		
Total T2 capital before regulatory deductions	11,275	11,555
– Property revaluation reserves[1]	11,056	10,988
– Impairment allowances and regulatory reserve eligible for inclusion in T2 capital	219	567
Regulatory deductions to T2 capital	(1,045)	(1,045)
– Significant capital investments in unconsolidated financial sector entities	(1,045)	(1,045)
Total T2 Capital	10,230	10,510
Total Capital	144,233	138,676

1 Includes the revaluation surplus on investment properties which is reported as part of retained profits and related adjustments made in accordance with the Banking (Capital) Rules issued by the HKMA.

(b) Treasury Risk

Capital Risk continued

Risk-weighted assets by risk type

(unaudited)

	2023	2022
Credit risk	**592,283**	687,532
Market risk	**19,898**	19,883
Operational risk	**62,088**	57,311
Total	**674,269**	764,726

Capital ratios (as a percentage of risk-weighted assets)

(unaudited)

The capital ratios on consolidated basis calculated in accordance with the Banking (Capital) Rules are as follows:

	2023	2022
CET1 capital ratio	**18.1%**	15.2%
T1 capital ratio	**19.9%**	16.8%
Total capital ratio	**21.4%**	18.1%

In addition, the capital ratios of all tiers as of 31 December 2023 would be reduced by approximately 0.9 percentage point after the prospective fourth interim dividend payment for 2023. (31 December 2022: reduced by approximately 0.5 percentage point after the prospective fourth interim dividend payment for 2022). The following table shows the pro-forma basis position of the capital ratios after the prospective interim dividend.

	Pro-forma 2023	Pro-forma 2022
CET1 capital ratio	**17.2%**	14.7%
T1 capital ratio	**19.0%**	16.3%
Total capital ratio	**20.5%**	17.6%

Leverage ratio

(unaudited)

	2023	2022
Leverage ratio	**8.5%**	7.3%
T1 capital	**134,003**	128,166
Exposure measure	**1,568,958**	1,752,201

Detailed breakdown of the Group's leverage exposure measure and a summary comparison table reconciling the assets of the Group's accounting balance sheet with the leverage exposure measure using the standard templates as specified by the HKMA can be viewed in the Banking Disclosure Statement in the Regulatory Disclosures section of our website www.hangseng.com.

Dividend policy

(unaudited)

Objective

The Bank's medium to long term dividend objective is to maintain steady dividends in light of profitability, regulatory requirements, growth opportunities and the operating environment. Its roadmap is designed to generate increasing shareholders' value through strategic business growth. The Bank would balance solid yields with the longer-term reward of sustained share price appreciation.

Considerations

The declaration of dividends is made at the discretion of the Board, which will take into account all relevant factors including the following:

- regulatory requirements;
- financial results;
- level of distributable reserves;
- general business conditions and strategies;
- strategic business plan and capital plan;
- statutory and regulatory restrictions on dividend payment; and
- any other factors the Board may deem relevant.

Phasing and Timing

Under normal circumstances and if the Board determines to declare a dividend at its discretion, dividends would be declared on a quarterly basis. The phasing of dividends would be planned on a prudent basis to allow for any unforeseen events, which might arise towards the end of an accounting period. Phasing of dividends would also take account of the volatility of the Bank's profits.

Other financial information

Other financial information required under the Banking (Disclosure) Rules and Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules can be viewed in the Banking Disclosure Statement that is available in the Regulatory Disclosures section of our website www.hangseng.com.

(b) Treasury Risk

Non-trading book foreign exchange exposures

Structural foreign exchange exposures

(unaudited)

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, 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'). The Group uses Hong Kong dollar as our presentation currency in our consolidated financial statements. Therefore, our consolidated balance sheet is affected by exchange differences between Hong Kong dollar and all the non-Hong Kong 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 foreign operations subject to minimum regulatory capital requirements are largely protected from the effect of changes in exchange rates.

The Group's foreign exchange exposures are prepared in accordance with the HKMA 'Return of Foreign Currency Position – (MA(BS)6)'.

For details of the Group's non-structural and structural foreign currency positions, please refer to the Banking Disclosure Statement that is available in the 'Regulatory Disclosures' section of the Bank's website.

Transactional foreign exchange exposures

(unaudited)

Transactional foreign exchange exposures arise from transactions in the banking book generating profit and loss or OCI 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 Global Markets and managed within limits. Transactional foreign exchange exposure generated through OCI reserves is managed within an agreed limit framework.

Liquidity and funding risk

Overview

(audited)

Liquidity risk is the risk that an entity does not have sufficient resources to meet its financial obligations when they fall due, or can only secure them at excessive cost. This may cause potential breaches in regulatory or internal metrics such as the Liquidity Coverage Ratio ('LCR') or the Internal Liquidity Metrics ('ILM'). Funding risk is the risk that an entity does not have sufficiently stable and diverse sources of funding or the funding structure is inefficient. This may cause potential breaches in regulatory or internal metrics such as the Net Stable Funding Ratio ('NSFR').

Liquidity and funding risk profile

(audited)

The Group adopt HSBC Group's policies, metrics and controls to manage liquidity and funding risk. The global policies are designed to be adaptable to changing business models, markets and regulations. They are designed to ensure that Group and entity management have oversight of our liquidity and funding risks in order to manage them appropriately. We manage liquidity and funding risk at an operating entity level to ensure that obligations can be met in the jurisdiction where they fall due, generally without reliance on other parts of the Group.

Operating entities are required to meet internal and applicable regulatory requirements at all times. These requirements are assessed through the ILAAP, which ensures that operating entities have robust strategies, processes and systems for the identification, measurement, management and monitoring of liquidity and funding risk over an appropriate set of time horizons, including risk appetite and also assesses the capability to manage liquidity and funding effectively in each major entity. Liquidity and funding risk metrics are set and managed at entity level but are subject to global review and challenge to ensure consistency of approach and application of the HSBC Group's policies and controls.

(b) Treasury Risk

Liquidity and funding risk continued

Structure and organisation

(audited)

ALCM teams are responsible for the application of policies and controls at a local operating entity level. The elements of the Group's policies and controls are underpinned by a robust governance framework, the two major elements of which are:

- ALCOs at the Group and entity level; and
- annual ILAAP support determination of risk appetite. All operating entities are required to prepare an ILAAP document at appropriate frequency.

The Board is ultimately responsible for determining the types and magnitude of liquidity risk that the Group is able to take and ensuring that there is an appropriate organisation structure for managing this risk. Under authorities delegated by the Executive Committee, the Group ALCO is responsible for managing all Asset, Liability and Capital Management issues including liquidity and funding risk management.

The Group ALCO delegates to the Group Tactical Asset and Liability Management Committee ('TALCO') the task of reviewing various analysis of the Group pertaining to liquidity and funding.

Compliance with liquidity and funding requirements is monitored by the ALCO and is reported to the RMM, Executive Committee, RC and the Board of Directors on a regular basis. This process includes:

- maintaining compliance with relevant regulatory requirements of the reporting entity;
- projecting cash flows under various stress scenarios and considering the level of liquid assets necessary in relation thereto;
- monitoring liquidity and funding ratios against internal and regulatory requirements;
- maintaining a diverse range of funding sources with adequate back-up facilities;
- managing the concentration and profile of term funding;
- managing contingent liquidity commitment exposures within pre-determined limits;
- maintaining debt financing plans;
- monitoring depositor concentration in order to avoid undue reliance on large individual depositors and ensuring a satisfactory overall funding mix; and
- maintaining liquidity and funding contingency plans. These plans identify early indicators of stress conditions and describe actions to be taken during stress, while minimising adverse long-term implications for the business.

Governance

(audited)

ALCM teams apply the Group's policies and controls at both an individual entity and Group level, and are responsible for the implementation of Group-wide and local regulatory policy at a legal entity level. Markets Treasury has responsibility for cash and liquidity management.

Treasury Risk Management carries out independent review, challenge and assurance of the appropriateness of the risk management activities undertaken by ALCM and Markets Treasury. Their work includes setting control standards, advising on policy implementation, and reviewing and challenging of reporting.

Internal Audit provide independent assurance that risk is managed effectively.

The management of liquidity and funding risk

(audited)

Funding and liquidity plans form part of the financial resource plan that is approved by the Board. The critical Board risk appetite measures are the LCR, ILM and NSFR. An appropriate funding and liquidity profile is managed through a wider set of measures:

- a minimum LCR requirement;
- a minimum NSFR requirement or other appropriate metric;
- an ILM requirement;
- a depositor concentration limit;
- cumulative term funding maturity concentration limit;
- liquidity metrics to monitor minimum requirement by currency;
- intra-day liquidity;
- the application of liquidity funds transfer pricing; and
- forward-looking funding assessments.

(b) Treasury Risk

Liquidity and funding risk continued

The management of liquidity and funding risk continued

(audited)

Liquidity coverage ratio

(unaudited)

The LCR aims to ensure that a bank has sufficient unencumbered high-quality liquid assets ('HQLA') to meet its liquidity needs in a 30-calendar-day liquidity stress scenario.

At 31 December 2023, the LCR of all the Group's principal operating entities were well above regulatory minimums and above the internally expected levels established by the Board.

Net stable funding ratio

(unaudited)

The Group uses the NSFR as a basis for ensuring operating entities raise sufficient stable funding to support their business activities. The NSFR requires institutions to maintain minimum amount of stable funding based on assumptions of asset liquidity.

At 31 December 2023, the NSFR of all the Group's principal operating entities were above the internally expected levels established by the Board.

Depositor concentration and term funding maturity concentration

(unaudited)

The LCR and NSFR metrics assume a stressed outflow based on a portfolio of depositors within each deposit segment. The validity of these assumptions is challenged if the portfolio of depositors is not large enough to avoid depositor concentration. Operating entities are exposed to term refinancing concentration risk if the current maturity profile results in future maturities being overly concentrated in any defined period.

At 31 December 2023, the depositor concentration and term funding maturity concentration of all the Group's principal operating entities were within the internally expected levels established by the Board.

Sources of funding

(unaudited)

Our primary sources of funding are customer deposits. We issue wholesale securities to supplement our customer deposits and change the currency mix or maturity profile of our liabilities.

Currency mismatch

(unaudited)

HSBC Group policy requires all operating entities to manage currency mismatch risks for material currencies. Limits are set to ensure that outflows can be met, given assumptions on stressed capacity in the FX swap markets.

Additional contractual obligations

(unaudited)

Under the terms of our current collateral obligations under derivative contracts (which are International Swaps and Derivatives Association ('ISDA') compliant CSA contracts), the additional collateral required to post in the event of downgrade in credit ratings is nil.

(b) Treasury Risk

Liquidity and funding risk continued

The management of liquidity and funding risk continued

Liquidity and funding risk in 2023

(unaudited)

The Group is required to calculate its LCR and NSFR on a consolidated basis in accordance with rule 11(1) of The Banking (Liquidity) Rules ('BLR') and is required to maintain both LCR and NSFR of not less than 100%.

The average LCRs for the periods are as follows:

	Quarter ended							
	31 Dec 2023	**30 Sep 2023**	**30 Jun 2023**	**31 Mar 2023**	31 Dec 2022	30 Sep 2022	30 Jun 2022	31 Mar 2022
Average LCR	**260.6%**	**240.1%**	**245.0%**	**276.7%**	275.3%	230.5%	206.8%	188.9%

The liquidity position of the Group remained strong and above the statutory requirement of 100%. The average LCR increased from 240.1% for the quarter ended 30 September 2023 to 260.6% for the quarter ended 31 December 2023, mainly reflecting the increase in holding of HQLA as a result of the increase in commercial surplus.

The composition of the Group's HQLA as defined under Schedule 2 of the BLR is shown as below. The majority of the HQLA held by the Group are Level 1 assets which consist mainly of government debt securities.

	Weighted amount (average value) for the quarter ended							
	31 Dec 2023	**30 Sep 2023**	**30 Jun 2023**	**31 Mar 2023**	31 Dec 2022	30 Sep 2022	30 Jun 2022	31 Mar 2022
Level 1 assets	**369,952**	**348,096**	**402,508**	**454,223**	400,658	381,314	353,034	344,686
Level 2A assets	**10,920**	**10,566**	**12,182**	**12,928**	12,385	13,549	15,579	17,109
Level 2B assets	**2,996**	**2,420**	**3,293**	**4,044**	2,827	3,423	3,742	3,099
Total	**383,868**	**361,082**	**417,983**	**471,195**	415,870	398,286	372,355	364,894

In accordance with the Banking (Liquidity) Rules, the Net Stable Funding Ratio ('NSFR') was implemented in Hong Kong with effect from 1 January 2018. The Group is required to calculate NSFR on a consolidated basis and maintain a NSFR of not less than 100%.

The NSFR for the reportable periods are as follows:

	At quarter ended							
	31 Dec 2023	**30 Sep 2023**	**30 Jun 2023**	**31 Mar 2023**	31 Dec 2022	30 Sep 2022	30 Jun 2022	31 Mar 2022
NSFR	**168.4%**	**165.8%**	**161.4%**	**163.6%**	163.8%	155.2%	155.0%	151.3%

The funding position of the Group remained strong and stable in 2023. The NSFR was 168.4% at the quarter ended 31 December 2023 (163.8% as at 31 December 2022), highlighting a surplus of available stable funding relative to the required stable funding requirement.

To comply with the Banking (Disclosure) Rules, the details of liquidity information can be found in the Regulatory Disclosures section of our website www.hangseng.com.

(b) Treasury Risk

Liquidity and funding risk continued

Analysis of cash flows payable under financial liabilities by remaining contractual maturities

(audited)

	Within 1 month	Over 1 month but within 3 months	Over 3 months but within 1 year	Over 1 year but within 5 years	Over 5 years	Total
At 31 December 2023						
Deposits from banks	**19,699**	**17**	**–**	**–**	**–**	**19,716**
Current, savings and other deposit accounts	**813,754**	**187,169**	**146,553**	**14,234**	**–**	**1,161,710**
Repurchase agreements – non-trading	**11,819**	**969**	**–**	**–**	**–**	**12,788**
Trading liabilities	**35,227**	**–**	**–**	**–**	**–**	**35,227**
Derivative financial instruments	**13,803**	**39**	**(40)**	**269**	**–**	**14,071**
Financial liabilities designated at fair value	**14,077**	**14,106**	**14,412**	**3,716**	**261**	**46,572**
Certificates of deposit in issue	**118**	**2,607**	**7,273**	**–**	**–**	**9,998**
Other financial liabilities	**14,423**	**6,122**	**4,516**	**830**	**99**	**25,990**
Subordinated liabilities	**–**	**475**	**1,531**	**28,627**	**3,221**	**33,854**
	922,920	**211,504**	**174,245**	**47,676**	**3,581**	**1,359,926**
Loan commitments	**503,632**	**–**	**–**	**–**	**–**	**503,632**
Contingent liabilities and financial guarantee contracts	**22,973**	**–**	**–**	**–**	**–**	**22,973**
	526,605	**–**	**–**	**–**	**–**	**526,605**
(restated) At 31 December 2022						
Deposits from banks	4,978	1	229	–	–	5,208
Current, savings and other deposit accounts	910,602	169,288	163,287	12,266	–	1,255,443
Repurchase agreements – non-trading	8,525	1,074	1,722	–	–	11,321
Trading liabilities	46,323	–	–	–	–	46,323
Derivative financial instruments	20,587	140	146	113	–	20,986
Financial liabilities designated at fair value	13,972	13,979	11,744	7,024	330	47,049
Certificates of deposit in issue	7,220	31,158	56,758	–	–	95,136
Other financial liabilities	16,118	6,383	7,743	1,108	205	31,557
Subordinated liabilities	–	404	1,556	25,359	8,259	35,578
	1,028,325	222,427	243,185	45,870	8,794	1,548,601
Loan commitments	518,838	–	–	–	–	518,838
Contingent liabilities and financial guarantee contracts	24,959	–	–	–	–	24,959
	543,797	–	–	–	–	543,797

The balances in the above tables incorporate all cash flows relating to principal and future coupon payments on an undiscounted basis. Trading liabilities and trading derivatives have been included in the 'Within one month' time bucket as they are typically held for short periods of time. The undiscounted cash flows payable under hedging derivative liabilities are classified according to their contractual maturity. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are included in the 'Over 5 years' time bucket. The undiscounted cash flows potentially payable under loan commitments and financial guarantee contracts are classified on the basis of the earliest date they can be called. Cash flows payable in respect of customer accounts are primarily contractually repayable on demand or at short notice.

(b) Treasury Risk

Interest Rate Risk in the Banking Book

Assessment and risk appetite

(unaudited)

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 held in order to hedge positions held with trading intent. Interest rate risk that can be economically hedged may be transferred to the Markets Treasury business. Hedging is generally executed through interest rate derivatives or fixed-rate government bonds. Any interest rate risk that Markets Treasury cannot economically hedge is not transferred and will remain within the global business where the risks originate.

The ALCM and Markets Treasury functions use a number of measures to monitor and control interest rate risk in the banking book, including:

- net interest income sensitivity;
- economic value of equity sensitivity;
- hold-to-collect-and-sell value at risk ('VaR'); and
- hold-to-collect-and-sell present value of a basis point ('PVBP').

Net interest income sensitivity

(audited)

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 by local ALCOs, where entities calculate both one-year and five-year NII sensitivities across a range of interest rate scenarios.

The table below sets out the effect on future net interest income of 100 basis points parallel rises or falls in all yield curves at the beginning of year from 1 January 2024 and 25 basis points parallel rises or falls in all yield curves at the beginning of year from 1 January 2024.

Assuming no management actions and all other non-interest rate risk variables remain constant, such a series of parallel rises in all yield curves would increase expected net interest income for the year ended 31 December 2024 by HK$1,787m for 100 basis points case and by HK$467m for 25 basis points case, while such a series of parallel falls in all-in yield curves would decrease expected net interest income by HK$2,206m for 100 basis points case and by HK$508m for 25 basis points case.

(b) Treasury Risk

Interest Rate Risk in the Banking Book continued

Net interest income sensitivity continued

(audited)

The expected net interest income sensitivity is described as follows:

	100bp parallel increase	100bp parallel decrease	25bp parallel increase	25bp parallel decrease
Change in 2024 expected net interest income				
– HKD	**895**	**(1,038)**	**233**	**(252)**
– USD	**191**	**(213)**	**48**	**(50)**
– Other	**701**	**(955)**	**186**	**(206)**
Total	**1,787**	**(2,206)**	**467**	**(508)**
Change in 2023 expected net interest income				
– HKD	1,024	(1,366)	285	(330)
– USD	493	(518)	123	(128)
– Other	1,142	(1,334)	288	(318)
Total	2,659	(3,218)	696	(776)

NII sensitivity figures set out in the table above represent the effect of pro forma movements in projected yield curves based on a static balance sheet size and structure. The exception to this is where the size of the balances or repricing is deemed interest rate sensitive, for example, early prepayment of mortgages. These sensitivity calculations do not incorporate actions that would be taken by Markets 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

(unaudited)

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.

The Group's EVE sensitivity is prepared in accordance with the HKMA 'Return of Interest Rate Risk Exposure -(MA(BS)12A)'. For details of the Group's EVE sensitivity, please refer to the Banking Disclosure Statement that will be available in the 'Regulatory Disclosures' section of the Bank's website.

(b) Treasury Risk

Interest Rate Risk in the Banking Book continued

Sensitivity of reserves

(audited)

The Group monitors the sensitivity of reported cash flow hedge reserves to interest rate movements on a quarterly basis by assessing the expected reduction in valuation of cash flow hedge due to parallel movements of plus or minus 100bps in all yield curves. These particular exposures form only a part of the Group's overall interest rate risk exposures.

The following table describes the sensitivity of reported cash flow hedge reserves to the stipulated movements in yield curves. The sensitivities are indicative and based on simplified scenarios.

	At 31 December 2023	Maximum impact	Minimum impact
+ 100 basis points parallel move in all yield curves	**(240)**	**(253)**	**(212)**
As a percentage of shareholders' equity at 31 December 2023 (%)	**(0.14)**	**(0.15)**	**(0.13)**
- 100 basis points parallel move in all yield curves	**318**	**318**	**266**
As a percentage of shareholders' equity at 31 December 2023 (%)	**0.19**	**0.19**	**0.16**

	At 31 December 2022	Maximum impact	Minimum impact
+ 100 basis points parallel move in all yield curves	(364)	(372)	(134)
As a percentage of shareholders' equity at 31 December 2022 (%)	(0.20)	(0.20)	(0.07)
- 100 basis points parallel move in all yield curves	420	445	177
As a percentage of shareholders' equity at 31 December 2022 (%)	0.23	0.24	0.10

(c) Market risk

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.

Key developments in 2023

(unaudited)

There were no material changes to our policies and practices for the management of market risk in 2023.

Governance and structure

(unaudited)

The following diagram summarises the main business areas where trading market risks reside and the market risk measures used to monitor and limit exposures.

	Trading Risk
Risk Type	– Foreign exchange & commodities – Interest rates – Credit spreads – Equities
Risk Measure	Value at risk/Sensitivity/Stress testing

The objective of the Group's 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 the established risk appetite.

(c) Market risk

Market risk governance

(audited)

Market risk is managed and controlled through limits approved by the Group's Board of Directors. These limits are allocated across business lines and to the Group's legal entities.

The Group 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 Global Markets 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 derivatives products to offices with appropriate levels of product expertise and robust control systems.

Key risk management processes

Monitoring and limiting market risk exposures

(unaudited)

The Group's objective is to manage and control market risk exposures while maintaining a market profile consistent with the Group's risk appetite. The Group uses a range of tools to monitor and limit market risk exposures including sensitivity analysis, value at risk ('VaR') and stress testing.

Sensitivity analysis

(audited)

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios including interest rates, foreign exchange rates and equity prices. The Group uses 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 ('VaR')

(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 the Group capitalises them. Where VaR is not calculated explicitly, the Group uses alternative tools as summarised in the 'Stress testing' section below.

The VaR 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;
- Standard VaR is calculated to a 99% confidence level and using a one-day holding period; and
- Stressed VaR uses a 10-day holding period and a 99% confidence interval based on a continuous one-year historical significant stress period.

The models also incorporate the effect of the 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

(audited)

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; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not reflect intra-day exposures.

(c) Market risk

Key risk management processes continued

Risk not in VaR ('RNIV') framework

(audited)

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.

Stress testing

(audited)

Stress testing is an important procedure that is integrated into the Group's 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 and overall Group levels. A scoring framework is in place for management to effectively assess the severity of the potential stress losses and the likelihood of occurrence of the stress scenarios. 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 risk appetite is limited.

Trading portfolios

(unaudited)

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.

Market risk in 2023

(unaudited)

During 2023, global financial markets were mainly driven by the inflation outlook, interest rates expectations and recession risks, coupled with banking distress in March and rising geopolitical tensions in the Middle East from October. Major central banks maintained restrictive monetary policies and bond markets experienced a volatile year. After rising significantly in the second and third quarter, US treasury bond yields fell during 4Q23, as lower inflation pressures led markets to expect that key rates would be cut in 2024. The interest rates outlook was also a major driver of global equity markets performance, alongside resilient corporate earnings and positive sentiment in the technology sector. Developed markets equities advanced significantly amid low volatility, while emerging markets performance was more subdued. In foreign exchange markets, the US dollar fluctuated against other major currencies, mostly in line with the Federal Reserve policy and bond yields expectations. Investor sentiment remained resilient in credit markets. High-yield and investment-grade credit spreads narrow in general, as fears of contagion in the banking sector in 1Q23 abated and economic growth remained resilient throughout 2023.

We continued to manage market risk prudently during 2023. 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.

(c) Market risk

Trading portfolios

(unaudited)

Value at risk of the trading portfolios

Trading VaR predominantly resides within Global Markets. Interest rate risks were the main drivers of trading VaR. The VaR for trading activity on 31 December 2023 was higher comparing to that on 31 December 2022, mainly driven by interest rate trading portfolio.

The Group's trading VaR for the year is shown in the table below.

Trading value at risk, 99% 1 day

(audited)

	At 31 December 2023	Maximum during the year	Average for the year
VaR			
Total	**38**	**57**	**42**
Foreign exchange trading	**8**	**11**	**5**
Interest rate trading	**34**	**57**	**43**
Portfolio diversification	**(4)**	**N/A**	**N/A**

	At 31 December 2022	Maximum during the year	Average for the year
VaR			
Total	32	43	34
Foreign exchange trading	2	13	3
Interest rate trading	31	42	34
Portfolio diversification	(1)	N/A	N/A

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, for example, interest rate 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 occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.

Backtesting

(unaudited)

The Group routinely validates the accuracy of the 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 necessary indicative of the actual performance of the business.

The number of hypothetical loss back-testing exceptions, together with a number of other indicators, are used to assess model performance and to consider whether enhanced internal monitoring of a VaR model is required.

Equities exposures

(audited)

The Group's equities exposures in 2023 and 2022 are reported as 'Financial assets mandatorily measured at fair value through profit or loss', 'Financial investments' and 'Trading assets' in the consolidated financial statements. These are subject to trading limit and risk management control procedures and other market risk regime.

(d) Climate risk

(unaudited)

Overview

We adopted HSBC Group's climate risk approach which aligned to the framework outlined by the Financial Stability Board's Task Force on Climate-related Financial Disclosures ('TCFD'), and two primary drivers of climate risk have been identified:

- physical risk, which arises from the increased frequency and severity of extreme weather events, such as typhoons and floods, or chronic shifts in weather patterns or sea level risk; and
- transition risk, which arises from the process of moving to a net zero economy, including changes in government policy and legislation, technology, market-demand and reputational implications triggered by a change in stakeholder expectations, actions or inaction.

In addition, the following thematic issues have been identified in relation to climate risk which are most likely to materialise in the form of reputational and litigation risks.

- net zero alignment risk – which arises from failure to meet the net zero commitments or failing to meet external expectations related to net zero, because of inadequate ambition and/or plans, poor execution, or inability to adapt to changes in external environment; and
- the risk of greenwashing, which arises from the act of knowingly or unknowingly making inaccurate, unclear, misleading or unsubstantiated claims regarding sustainability to the stakeholders.

Approach

It has been recognised that the physical impacts of climate change and the transition to net zero economy can create significant financial risks for the companies, investors and the financial systems. The Group may be affected by the financial or non-financial impacts of climate risks either directly or indirectly through its relationships with customers and through macro impacts on the economies the Group serves.

The climate risk approach has been developed which aims to effectively manage the material climate risks that could impact bank operations, financial performance, stability and reputation. The approach is informed by the evolving expectations of the regulators. Climate considerations and the thematic issues of net zero alignment risk and the risk of greenwashing are incorporated within the Group's traditional risk types in line with HSBC Group-wide risk management framework.

The table below provide an overview of the climate risk drivers considered with the climate risk approach. Primary risk drivers refer to risk drivers aligned to the TCFD, which sets a framework to help public companies and other organisations disclose climate-related risks and opportunities.

(d) Climate risk

(unaudited)

Overview continued

Approach continued

<table>
<caption>Climate Risk – Primary Risk</caption>
<tr><th>Drivers</th><th></th><th>Details</th><th>Potential Impacts</th></tr>
<tr><td rowspan="2">Physical</td><td>Acute</td><td>Increased frequency and severity of weather events causing disruption to business operations</td><td rowspan="6">• 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</td></tr>
<tr><td>Chronic</td><td>Longer-term shifts in climate patterns (e.g. sea level rise or shifting monsoons etc.)</td></tr>
<tr><td rowspan="4">Transition</td><td>Policy and legal</td><td>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</td></tr>
<tr><td>Technology</td><td>Replacement of existing products with lower emission options</td></tr>
<tr><td>End-demand (market)</td><td>Changing consumer demand from individuals and corporates</td></tr>
<tr><td>Reputational</td><td>Increased scrutiny following a change in stakeholder perceptions of climate-related action or inaction</td></tr>
</table>

Climate risk management

Key developments in 2023

The following outlines our key developments in 2023:

- Climate risk approach has been updated to incorporate net zero alignment risk and information on how climate related litigation risk should be managed.
- Climate-related training has been provided to Board and senior management, and sponsored nominated staff to take climate risk related professional certifications.
- Climate risk metrics have been expanded beyond Hong Kong to assess the impact of physical risk on the Group's retail mortgage portfolio in mainland China and Macau.

While we have made progress in enhancing our climate risk management capabilities, further work remains. This includes the need to develop additional metrics and tools to measure the Group's exposures to climate-related risks and to incorporate these tools within decision making.

Governance and structure

The Board takes overall responsibility for the Group's climate strategy, overseeing executive management in developing the approach, execution and associated reporting.

The Chief Risk and Compliance Officer is responsible for the management of climate-related risks.

The Risk Management Meeting and Risk Committee receive regular updates on the climate risk profile and progress of the climate risk management.

Risk appetite

The Group's climate risk appetite forms part of the Group's risk appetite statement ('RAS') and supports the business in delivering the Group's climate strategy effectively and sustainably.

The Group's climate RAS is approved and overseen by the Board. It is supported by risk appetite metrics and tolerance thresholds. The Group has also defined additional Key Risk Management Information ('KRMI') metrics.

Policies, processes and controls

Climate risk has been integrated into policies, processes and controls across many areas of the organisation, and they will continue to be updated as the climate risk management capabilities mature over time.

(d) Climate risk

(unaudited)

Embedding climate risk within existing risk taxonomy

The table below provides further details on how climate risk has been integrated across key risk types.

Risk type	Details
Wholesale Credit Risk	The Group considers physical and transition risks to be the key climate risks impacting wholesale credit risk. For transition risk, the Group has metrics in place to monitor the exposure of its wholesale corporate lending portfolio to six high transition risk sectors. The Group's relationship managers engage with their wholesale clients through a transition and physical risk questionnaire and recently introduced an updated questionnaire, the transition engagement questionnaire. The questionnaire is used to gather and assess information about the alignment of clients' business models to net zero economy and their exposure to physical & transition risk. Responses from the questionnaire are utilised to create a climate risk score for its key wholesale customers. The credit policies require relationship managers to comment on climate risk factors in credit applications for new money requests and annual credit reviews. The policies require manual credit risk rating overrides if climate is deemed to have a material impact on credit risk under 12 months if not already captured under the original credit risk rating. Key challenges for further embedding climate risk into credit risk management relate to the availability of adequate physical risk data to assess impacts to the Group's clients.
Retail Credit Risk	Climate risk identification and assessment within the retail mortgage portfolio remains a key priority and the Group has implemented risk policies, tools and guidelines to manage this risk across all markets. The Group's retail credit risk management policy requires each mortgage market to conduct an annual review of their climate risk framework including perils and data sources, to ensure they remain fit for purpose. In 2023, the Group introduced soft trigger monitoring process for physical risk exposure which requires review of the underlying risk exposure drivers to identify whether any mitigating actions are required if a market reaches or exceeds a set threshold. This ensures markets are actively considering their balance sheet risk exposure to peril events. The Group continues to proactively manage and monitor potential physical climate risk on the balance sheet in retail mortgage markets. Properties or areas with potentially heightened physical risk are identified, assessed, and monitored through climate metrics at least on quarterly basis. The Group has implemented Physical Climate RAS for Hong Kong and key climate risk metrics for mainland China and Macau to assess the impact of physical risk on the Group's retail mortgage portfolios. Significant progress has been made to develop infrastructure to monitor the direct impact of climate events on our portfolio besides ensuring adequate customer support measures are available for customers impacted by climate events. In 2023, the Group undertook a stress test of climate risk for retail portfolios at the behest of the Hong Kong Monetary Authority. In addition, the Group participated in the annual HSBC Group internal climate scenario analysis exercise to further strengthen its understanding of the potential impacts that physical risk could have on its mortgage portfolios. The internal climate models have been enhanced to refine flood and wind, introduce affordability metrics and to consider the impact of un-insurable properties in Hong Kong. However, availability of physical and transition risk data of different markets to facilitate ongoing climate risk management remains a key challenge.

(d) Climate risk

(unaudited)

Embedding climate risk within existing risk taxonomy continued

Risk type	Details
Treasury Risk	**Treasury Risk** The Group considers both physical and transition risk to be relevant for Treasury Risk. From a Capital perspective, Climate Risk is considered as part of our ICAAP in 2023, and the Group is continuing to develop its approach for climate risk management. From a Liquidity perspective, an initial analysis has been conducted to understand the potential climate risk exposures that may exist across key liquidity risk drivers and documented the analyses in ILAAP. The Group has updated the Treasury Risk policies to ensure that the impact of climate risk is considered when assessing applicable Treasury risk functions. Treasury portfolios are included within scope of the Internal Climate Scenario Analysis and the Hong Kong Monetary Authority's Climate Risk Stress Test, with potential quantitative impacts on relevant Hold to Collect and Sell ('HTC&S') positions estimated. **Pension Risk** HSBC Group is conducting an annual exercise to monitor HSBC Group's largest pension plans' (including the Group) exposure to climate risk. The Group adopts HSBC Group pension policies which has been updated to explicitly reflect climate considerations.
Traded Risk	In 2023 the Group participated in the internal climate scenario analysis ('ICSA') and refined Traded Risk internal scenarios to reflect sub-sector differences within high transition risk sectors. Two scenarios (e.g. delayed transition and downside physical) were expanded for the Traded Risk portfolio. During the expansion, all risk factors (interest rates, exchange rates, corporate bonds and corporate stocks) receive shocks that reflect the impact of abrupt increases in carbon prices and the resulting structural economic impact on productivity for high-risk sectors.
Reputational Risk	Reputational impact of climate risk has been managed through its broader reputational risk framework supported by sustainability risk policies. The sustainability risk policies set out its appetite for financing activities in certain sectors. In 2021, the thermal coal phase-out policy has been published, and in 2022, the energy policy has been updated. Both policies aim to drive down greenhouse emissions while supporting a just transition.

(d) Climate risk

(unaudited)

Embedding climate risk within existing risk taxonomy continued

Risk type	Details
Regulatory Compliance Risk	Regulatory Compliance continues to prioritise the identification, assessment and management of compliance risks that may arise from climate risk. Regulatory Compliance's particular focus is on mitigating climate risks inherent to the product lifecycle, through the continuous review, monitoring and enhancement of product-related controls and policies, where relevant. Another key focus of Regulatory Compliance is the ongoing development and capability of its people through training, communications and dedicated guidance, with a particular focus on keeping up to date with emerging risks as a result of changes in the evolving regulatory landscape. To support the ongoing management and mitigation of climate risk, key developments in 2023 included the enhancement of Group level product marketing framework and procedures. Regulatory Compliance worked with all business lines to enhance product-related marketing controls designed to ensure that marketing of climate and ESG-related products is clear, fair and not misleading and that the approval processes for such materials are reviewed and overseen by Regulatory Compliance. This has improved the ability to identify, assess and manage product-related greenwashing risks throughout the product marketing approval process. Examples of ongoing enhancements include: • Ensuring Regulatory Compliance provides risk oversight and review of new product marketing materials with any reference to sustainability and ESG; • Developing the Group's product marketing controls to ensure climate claims are robustly evidence and substantiated within product marketing materials; and • Clarifying and improving the product marketing framework, procedures and associated guidance, to ensure product-related marketing materials comply with both internal and external standards, and are subject to robust governance. The HSBC Group's policies set the standards that are required to manage the risk of breaches of regulatory duty to customers, including those related to climate risk, ensuring fair customer outcomes are achieved. To make sure responsibilities are met in this regard, the HSBC Group's policies are subject to continuous review and enhancement. Regulatory Compliance continues to operate an ESG and Climate Risk Working Group at HSBC Group level to track and monitor the integration and embedding of climate risk management in the function's activities. While monitoring regulatory and legislative changes across the ESG and climate risk agenda, the ongoing development and improvement of the HSBC Group's monitoring capabilities remains a priority, ensuring appropriate alignment to the broader focus on regulatory compliance risks. In Asia-Pacific, a dedicated working team of HSBC Group continues to coordinate the regional implementation of climate risk-related enhancements across the regulatory compliance function of the Group and the wider HSBC Group.
Resilience Risk	Operational and Resilience Risk 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. Resilience risk policies are subject to continuous improvement to remain relevant to evolving climate risks. Ongoing new developments relevant to our own operations are reviewed to ensure climate risk considerations are effectively captured.
Model Risk	In 2023, HSBC Group approved a new Climate Risk and ESG Model Category Standard for adoption globally (including the Group) which sets out minimum control requirements for identifying, measuring and managing model risk for climate-related models.

(e) Resilience risk

(unaudited)

Overview

Resilience risk is the risk of sustained and significant business disruption, execution, delivery or physical security or safety events, causing the inability to provide critical services to our customer, affiliates, and counterparties. Resilience risk arises from failures or inadequacies in processes, people, systems or external events.

Resilience risk management

Key developments in 2023

The Operational and Resilience Risk sub-function provides robust Risk Steward oversight of the management of 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 reporting of non-financial risks providing easy-to-access risk and control information and metrics that enable management to focus on non-financial 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; and
- We prioritize our efforts on material risks and areas undergoing strategic growth, aligning our location strategy to this need.

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 Risk Management Meeting, chaired by the Chief Risk and Compliance Officer, with an escalation path to the 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, 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 risk steward opinion papers to formal governance. We accept that 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.

(f) Regulatory Compliance Risk

(unaudited)

Overview

Regulatory compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct (including unauthorised trading) 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.

Key developments in 2023

The dedicated programme to embed our updated purpose-led Conduct Approach has concluded. Work to map applicable regulations to our risks and controls continued in 2023 alongside adoption of new tooling to support enterprise-wide horizon scanning for new regulatory obligations and to 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 Compliance function has been restructured and integrated into a combined Risk and Compliance function. The Head of Regulatory Compliance and the Head of Financial Crime and Money Laundering Officer report directly to the Chief Risk and Compliance Officer ('CRCO'). The Regulatory Compliance capability and the Financial Crime capability both continue to work closely with the CRCO and her respective teams to identify and manage regulatory and financial crime compliance risks.

Regulatory Compliance and Financial Crime teams work together and with relevant stakeholders to achieve good conduct outcomes and provide enterprise-wide support on the Compliance risk agenda in close collaboration with colleagues from the Risk and Compliance function.

Key risk management processes

The HSBC Group's Regulatory Compliance 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 HSBC Group capability provides oversight, review and challenge of the global market, regional and line of business teams to help them identify, assess and mitigate regulatory compliance risks, where required. The HSBC Group's regulatory compliance risk policies are regularly reviewed. HSBC Global policies and procedures require the identification and escalation of any actual or potential regulatory breaches, and relevant events and issues of the Bank are escalated to the RMM and the Risk Committee, as appropriate.

(g) Financial Crime Risk

(unaudited)

Overview

Financial crime risk is the risk that the Group'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 2023

We regularly review the effectiveness of our financial crime risk management framework, which includes continued consideration of the complex and dynamic nature of sanctions compliance and export control risk. We continued to respond to the economic sanctions and trade restrictions imposed on Russia, including methods used to limit sanctions evasion.

We continued to make progress with several key financial crime risk management initiatives, including:

- We deployed our intelligence-led, dynamic risk assessment capability for customer account monitoring in Wealth and Private Banking ('WPB') and Commercial Banking ('CMB').
- We successfully introduced the required changes to our transaction screening capability to accommodate the global change to payment systems formatting under ISO20022 requirements.
- We made enhancements in response to the rapidly evolving and complex global payments landscape and refined our digital assets and currencies strategy.

Governance and structure

The Compliance function has been restructured and integrated into a combined Risk and Compliance function. The Head of Regulatory Compliance and the Head of Financial Crime and Money Laundering Reporting Officer report directly to the Chief Risk and Compliance Officer, while the 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 the Bank 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 laws and regulations. We are committed to complying with the law and regulation 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 on an ongoing basis, 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, improved our investigative and monitoring capabilities through technology deployments, as well as developed more targeted metrics. We have also enhanced 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. In 2023, our focus remained on measures to improve the overall effectiveness of the financial crime framework.

(h) Model risk

(unaudited)

Overview

Model risk is the potential for adverse consequences from model errors or the inappropriate use of modelled outputs to inform business decisions.

Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.

Key developments in 2023

Received regulatory feedback on a number of submissions across internal ratings-based ('IRB') models for credit risk. A programme of work has been initiated to address feedback from the Prudential Regulation Authority ('PRA') and HKMA on the IRB models for Wholesale and Retail Credit.

Made changes to the Value at Risk ('VaR') model in response to the interest rate changes by central banks across major markets to curb inflationary pressures.

Following the changes to address gaps in the control framework that emerged as a result of increases in adjustments during the COVID-19 pandemic; the dependency on adjustments being applied to model outputs has reduced.

The PRA published Supervisory Statement (SS1/23) which sets out guiding principles for how model risks should be managed across the industry. The principles set out the core disciplines necessary for a robust Model Risk Management ('MRM') framework to manage model risk effectively. A programme of work has been initiated to uplift MRM Framework to meet the enhanced model risk management requirements.

Enhanced our frameworks and controls as more Climate Risk and Artificial Intelligence ('AI') and Machine Learning ('ML') models are being embedded in business processes. Focused also on Generative AI due to the pace of technological changes where applicable model risks need to be managed.

Continued to carry out regular review on model inventory completeness and accuracy, and increased awareness of model landscape and model limitations across the Group.

Governance

Model oversight forums provide oversight of models used in the Group to oversee model risk management activities based on associated model categories and focus on local delivery and requirements.

Key risk management processes

A variety of modelling approaches, including regression, simulation, sampling, machine learning and judgemental scorecards for a range of business applications are used. These activities include customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting.

Model risk management policies and procedures are regularly reviewed, and required the first line of defence to demonstrate comprehensive and effective controls based on a library of model risk controls.

We report on model risk to senior management on a regular basis through the use of the risk map, risk appetite and regular key updates.

The effectiveness of model oversight structure is regularly reviewed to ensure appropriate understanding and ownership of model risk continued to be embedded in the businesses and functions.

(i) Insurance manufacturing operation risk

Overview

(unaudited)

The majority of the risk in the insurance business derives from manufacturing activities and can be categorised as insurance underwriting risk and financial risk. Financial risk includes the risk of not being able to 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 of which arises from market risk, credit risk and liquidity risk. Insurance underwriting 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.

Group's bancassurance model

(unaudited)

The majority of sales are through an integrated bancassurance model that provides insurance products principally for customers with whom we have a banking relationship. For the insurance products we manufacture, the majority of sales are savings and protection contracts.

We choose to manufacture these insurance products through a Group's subsidiary 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.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a handful of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. 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 Hong Kong, China and Macau.

Insurance products are sold through all global businesses, but predominantly by WPB and CMB through our branches and direct channels.

Key developments in 2023

(unaudited)

Specific policies and practices relating to the risk management of insurance contracts have not changed materially over 2023. During the year, there was continued market volatility observed across interest rates, equity and credit markets and foreign exchange rates. One area of key risk management focus was the implementation of the new accounting standard, HKFRS 17, which became effective on 1 January 2023. Given the fundamental nature of the impact of the accounting standard on insurance accounting, this presents additional financial reporting and model risks for our insurance business.

Governance

(unaudited)

Insurance underwriting risks are managed to a defined risk appetite, which is aligned to the Group's risk appetite and risk management framework (including the three lines of defence model). The Insurance Risk Management Meeting oversees the control framework and is accountable to the Group's Risk Management Meeting on risk matters relating to insurance business.

The monitoring of the risks within the insurance operations is carried out by the Insurance Risk teams. Specific risk functions, including wholesale credit & market risk, operational risk, information security risk and compliance, support Insurance Risk teams in their respective areas of expertise.

In addition, our insurance manufacturing subsidiary performs annually an Own Risk and Solvency Assessment ('ORSA') to assess its risk profile, the adequacy of risk management and also its current, and likely future, solvency and liquidity positions according to local regulation.

(i) Insurance manufacturing operation risk

Measurement

(audited)

The following table shows the composition of the Group's insurance manufacturing subsidiary's assets and liabilities by contract type.

Balance sheet of insurance manufacturing subsidiary by type of contract [5,6]

(audited)

	Life direct participating contracts[1]	Life other[2]	Other contracts[3]	Shareholders' assets and liabilities	Total
2023					
Financial assets:					
– financial assets mandatorily measured at fair value through profit or loss	148,205	8,377	47	–	156,629
– derivative	46	3	–	–	49
– financial investments	–	–	191	8,150	8,341
– other financial assets[4]	4,230	239	45	986	5,500
Total financial assets	152,481	8,619	283	9,136	170,519
Insurance contract assets	–	10	–	–	10
Reinsurance contract assets	–	5,378	–	–	5,378
Other assets and investment properties	6,168	338	2	2,923	9,431
Total assets	158,649	14,345	285	12,059	185,338
Liabilities under investment contracts designated at fair value	–	–	264	–	264
Insurance contract liabilities	158,595	8,614	–	–	167,209
Reinsurance contract liabilities	–	1,111	–	–	1,111
Deferred tax	–	–	–	10	10
Derivative financial instruments	145	8	–	2	155
Other liabilities	3,393	191	11	2,102	5,697
Total liabilities	162,133	9,924	275	2,114	174,446
Total equity	–	–	–	10,892	10,892
Total liabilities and equity	162,133	9,924	275	13,006	185,338

(i) Insurance manufacturing operation risk

Measurement continued

(audited)

Balance sheet of insurance manufacturing subsidiary by type of contract continued [5,6]

(audited)

	Life direct participating contracts[1]	Life other[2]	Other contracts[3]	Shareholders' assets and liabilities	Total
2022					
Financial assets:					
– financial assets mandatorily measured at fair value through profit or loss	143,618	9,120	80	–	152,818
– derivative	257	16	–	5	278
– financial investments	–	–	224	6,126	6,350
– other financial assets[4]	2,553	324	42	458	3,377
Total financial assets	146,428	9,460	346	6,589	162,823
Insurance contract assets	–	4	–	–	4
Reinsurance contract assets	–	5,663	–	–	5,663
Other assets and investment properties	6,588	320	2	1,927	8,837
Total assets	153,016	15,447	348	8,516	177,327
Liabilities under investment contracts designated at fair value	–	–	333	–	333
Insurance contract liabilities	143,836	8,530	–	–	152,366
Reinsurance contract liabilities	–	1,112	–	–	1,112
Deferred tax	–	–	–	10	10
Derivative financial instruments	73	11	–	–	84
Other liabilities	11,957	412	–	467	12,836
Total liabilities	155,866	10,065	333	477	166,741
Total equity	–	–	–	10,586	10,586
Total liabilities and equity	155,866	10,065	333	11,063	177,327

1 Life direct participating contracts are measured under the variable fee approach measurement model.

2 Life other contracts are measured under the general measurement model. Life other contracts mainly include protection type contracts as well as reinsurance contracts. The reinsurance contracts primarily provide diversification benefits over the life direct participating contracts.

3 Other contracts includes investment contracts for which the Group does not bear significant insurance risk.

4 Comprise mainly loans and advances to banks, cash and inter-company balances with other non-insurance legal entities.

5 Balance sheet of insurance manufacturing operations is shown before elimination of inter-company transactions with The Bank's non-insurance operations.

6 From 1 January 2023, we adopted HKFRS 17 *'Insurance Contracts'*, which replaced HKFRS 4 *'Insurance Contracts'*. Comparative data have been restated accordingly.

(i) Insurance manufacturing operation risk

Stress and Scenario Testing

(audited)

Stress testing forms a key part of the risk management framework for our insurance business. The Group's insurance manufacturing subsidiary participates in regulatory stress tests, as well as internally developed stress and scenario tests. The results of these stress tests and the adequacy of management action plans to mitigate these risks are considered in our insurance manufacturing subsidiary's regulatory ORSA as required under HKRBC.

Key Risk Types

The key risks for the insurance operations are market risks (in particular interest rate and equity), and credit risks, followed by insurance underwriting risk and operational risks. Liquidity risk, while more significant for the banking business, is minor for our insurance manufacturing subsidiary.

Market risk (insurance)

(audited)

Market risk is the risk of changes in market factors affecting the Group's manufacturing subsidiary's capital or profit. Market factors include interest rates, equity and growth assets, spread risk and foreign exchange rates.

Exposure of our insurance business varies depending on the type of contract issued. Most significant life insurance products of our insurance business are contracts with discretionary participating features ('DPF') issued in Hong Kong. These products typically include some form of capital guarantee or guaranteed return, on the sums invested by the policyholders, to which bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in bonds with a proportion allocated to other asset classes, to provide customers with the potential for enhanced returns. Contracts with DPF are further classified into Life direct participating contracts and Life other contracts under HKFRS 17.

DPF products expose our insurance business 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 the Group's insurance manufacturing subsidiary. Allowances are made against the cost of such guarantees, calculated by stochastic modelling.

The cost of such guarantees are generally not material as it is absorbed by the CSM.

For unit-linked contracts, market risk is substantially borne by the policyholders, but some market risk exposure typically remains as fees earned are related to the market value of the linked assets.

Our insurance manufacturing subsidiary has market risk mandates which specify the investment instruments in which it is permitted to invest and the maximum quantum of market risk which they may retain. It manages market risk by using, among others, some or all of the techniques listed below, depending on the nature of the contracts written:

- for products with DPF, adjusting bonus rates to manage the liabilities to policyholders and the effect is that a significant portion of the market risk is borne by the policyholders;
- asset and liability matching where asset portfolios are structured to support projected liability cash flows. Our insurance manufacturing subsidiary manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity, volatility and target investment return. It is not always possible to match asset and liability durations due to uncertainty over the receipt of all future premiums and the timing of claims; and the forecast payment dates of liabilities may exceed the duration of the longest dated investments available. Our insurance manufacturing subsidiary uses models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities and the ALCO employs the outcomes in determining how to best structure asset holdings to support liabilities;
- using derivatives and other financial instruments to protect against adverse market movements; and
- designing new products to mitigate market risk, such as changing the investment return sharing portion between policyholders and the shareholder.

(i) Insurance manufacturing operation risk

Key Risk Types continued

Sensitivity of the Group's insurance manufacturing subsidiaries to market risk factors

(audited)

	2023			2022		
	Effect on CSM	**Effect on profit after tax**	**Effect on total equity**	Effect on CSM	Effect on profit after tax	Effect on total equity
+100 basis point parallel shift in yield curves[1]	**112**	**(3)**	**(3)**	(113)	(215)	(215)
-100 basis point parallel shift in yield curves[1]	**(697)**	**(10)**	**(10)**	(76)	(76)	(76)
+100 basis point shift in credit spreads[1]	**(1,284)**	**(285)**	**(285)**	(1,287)	(573)	(573)
-100 basis point shift in credit spreads[1]	**1,231**	**365**	**365**	2,050	365	365
10% increase in growth assets[2]	**603**	**93**	**93**	383	50	50
10% decrease in growth assets[2]	**(632)**	**(96)**	**(96)**	(525)	(64)	(64)
10% appreciation in US dollar exchange rate against local functional currency[2]	**274**	**3**	**3**	265	20	20
10% depreciation in US dollar exchange rate against local functional currency[2]	**(274)**	**(3)**	**(3)**	(265)	(20)	(20)

1 For the sensitivity to parallel shift in yield curves and shift in credit spreads, an absolute +/- 100 basis points of the discount rate is used.

2 For the sensitivity to growth assets and USD exchange rate, a relative +/- 10% (i.e. multiply the assumption by 110% or 90%) is used.

Growth assets primarily comprise equities securities, collective investment schemes, derivatives (other than exchange rate contracts) and investment properties, variability in growth asset fair value constitutes a market risk to the Group's insurance manufacturing subsidiary.

The relationship between the profit and total equity and the risk factors is non-linear and nonsymmetrical, therefore the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, and are stated before allowance for management actions which may mitigate the effect of changes in the market environment. The sensitivities presented do not allow for adverse changes in policyholders' behaviour that may arise in response to changes in market rates.

Credit risk (insurance)

(audited)

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 manufacturing subsidiary:

- 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.

(i) Insurance manufacturing operation risk

Key Risk Types continued

Credit risk (insurance) continued

(audited)

The amounts outstanding at the balance sheet date in respect of these items are mainly reflected as 'Financial investments' and 'Reinsurance contract assets' in the table of 'Balance sheet of insurance manufacturing subsidiary by type of contract' under 'Insurance manufacturing operation risk' section.

Our insurance manufacturing subsidiary has credit risk mandates and limits within which it is permitted to operate, which consider the credit risk exposure quality and performance of its investment portfolios. 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 the investment credit exposures using credit spread sensitivities and default probabilities.

Our insurance manufacturing subsidiary uses tools to manage and monitor credit risk. These include a credit report which contains a watch-list of investments with current credit concerns to identify investments which 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.

Impairment for debt securities measured at amortised cost and FVOCI is calculated in three stages and financial assets are allocated into one of the three stages where the transfer mechanism depends on whether there is a significant increase in credit risk between its first recognition and the relevant reporting period. After the allocation, the measurement of ECL, which is the product of PD, LGD and EAD, will reflect the change in risk of default occurring over the remaining life of the instruments. Note 2(j) of the financial statements set out the details on related accounting policy.

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholders; therefore exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds.

The credit quality of the reinsurance contract assets is assessed as 'strong' (as defined on 'Credit quality classification' under 'Credit risk' section), with Nil exposure being past due or impaired (2022: Nil). The credit quality of financial assets is included under the Credit Risk section. The risk associated with credit spread volatility is to a large extent migrated by holding debt securities to maturity, and sharing a degree of credit spread experience with policyholders.

Liquidity risk (insurance)

(audited)

Liquidity risk is the risk that the Group's insurance manufacturing subsidiary, 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.

Liquidity risk is managed by cashflow 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.

Our insurance manufacturing subsidiary completes quarterly liquidity risk reports and an annual review of the liquidity risks to which it is exposed.

(i) Insurance manufacturing operation risk

Key Risk Types continued

Liquidity risk (insurance) continued

(audited)

The amounts of insurance contract liabilities that are payable on demand are set out by the product grouping below:

Amounts Payable on Demand

(audited)

	2023		2022	
	Amounts Payable on Demand	**Carrying Amount for these Contracts**	Amounts Payable on Demand	Carrying Amount for these Contracts
Life direct participating contracts	**147,593**	**158,655**	132,181	143,845
Life other contracts	**6,384**	**8,609**	6,338	8,529
At 31 December	**153,977**	**167,264**	138,519	152,374

Insurance underwriting risk

(audited)

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, lapses and expense rates. The principal risk our insurance manufacturing subsidiary faces 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 Group's insurance manufacturing subsidiary primarily uses the following framework and processes to manage and mitigate insurance underwriting risk:

- 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 to keep risks within risk appetite, reduce volatility and improve capital efficiency; and
- oversight of expense and reserve risks by our insurance manufacturing subsidiary's Financial Reporting Committee.

(i) Insurance manufacturing operation risk

Key Risk Types continued

Insurance underwriting risk continued

(audited)

The following table shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions for our insurance manufacturing subsidiary. These sensitivities are prepared in accordance with current HKFRSs.

Sensitivity of the Group's insurance manufacturing subsidiaries to insurance underwriting risk factors

(audited)

	Effect on CSM (gross)[1]	Effect on profit after tax (gross)[1]	Effect on profit after tax (net)[2]	Effect on total equity (gross)[1]	Effect on total equity (net)[2]
At 31 December 2023					
10% increase in mortality and/or morbidity rates	**(350)**	**(26)**	**(45)**	**(26)**	**(45)**
10% decrease in mortality and/or morbidity rates	**361**	**27**	**47**	**27**	**47**
10% increase in lapse rates	**(238)**	**(30)**	**(40)**	**(30)**	**(40)**
10% decrease in lapse rates	**252**	**31**	**41**	**31**	**41**
10% increase in expense rates	**(21)**	**(0)**	**(0)**	**(0)**	**(0)**
10% decrease in expense rates	**22**	**1**	**1**	**1**	**1**
At 31 December 2022					
10% increase in mortality and/or morbidity rates	(358)	(20)	(50)	(20)	(50)
10% decrease in mortality and/or morbidity rates	361	19	51	19	51
10% increase in lapse rates	(166)	(16)	(24)	(16)	(24)
10% decrease in lapse rates	150	15	24	15	24
10% increase in expense rates	(26)	(1)	(1)	(1)	(1)
10% decrease in expense rates	19	0	0	0	0

1 The gross sensitivities impacts are provided before considering the impacts of reinsurance contracts held as risk mitigation.

2 The net sensitivities impacts are provided after considering the impacts of reinsurance contracts held as risk mitigation.

For the above sensitivity, a relative +/- 10% (i.e. multiply the assumption by 110% or 90%) is used.

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 CSM (and therefore expected future profits) 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.