

Risk review and Capital review

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Risk review and Capital review

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The following parts of the Risk review and Capital review form part of these financial statements and are audited by the external auditors:

a) Risk review: Disclosures marked as 'audited' from the start of Credit risk section (page 207) to the end of other principal risks in the same section (page 255); and

b) Capital review: Tables marked as 'audited' from the start of 'Capital base' to the end of 'Movement in total capital', excluding 'Total risk-weighted assets' (pages 271 and 272).

Enterprise Risk Management Framework

Risk management is at the heart of banking, it is what we do. Managing risk effectively is how we drive commerce and prosperity for our clients and our communities, and it is how we grow sustainably and profitably as an organisation.

Effective risk management is essential in delivering consistent and sustainable performance for all our stakeholders and is a central part of the financial and operational management of the Group. The Group adds value to clients and the communities in which they operate by balancing risk and reward to generate returns for shareholders.

The Enterprise Risk Management Framework (ERMF) enables the Group to manage enterprise-wide risks, with the objective of maximising risk-adjusted returns while remaining within our Risk Appetite (RA). The ERMF is complemented by frameworks, policies and standards which are mainly aligned to the Principal Risk Types (PRTs), and is embedded across the Group, including its branches and subsidiaries.¹ It is reviewed and approved by the Board annually, with the latest version being effective from August 2024.

Risk culture

Risk culture encompasses our general awareness, attitudes, and behaviours towards risk, as well as how risk is managed at enterprise level.

A healthy risk culture is one in which everyone takes personal responsibility to identify and assess, openly discuss, and take prompt action to address existing and emerging risks. We expect our control functions to provide oversight and challenge constructively, collaboratively, and in a timely manner on the risks owned by the first line of defence. This effort is reflected in our valued behaviours and underpinned by our Code of Conduct and Ethics.



Further details on our Code of Conduct and Ethics can be found on [page 95](#).

The risks we face constantly evolve, and we must always look for ways to manage them as effectively as possible. While unfavourable outcomes will occur from time to time, a healthy risk culture means that we react quickly and transparently. We can then take the opportunity to learn from our experience and improve our framework and processes.

Strategic risk management

The Group's approach to strategic risk management includes the following:

- **Risk identification:** impact analyses of risks that arise from the Group's growth plans, strategic initiatives, and business model vulnerabilities are reviewed. This assesses how existing risks have evolved in terms of relative importance and whether new risks have emerged.
- **Risk Appetite:** impact analysis is performed to assess if strategic initiatives can be achieved within RA and highlight areas where additional RA should be considered.
- **Stress testing:** identified risks are used to develop scenarios for enterprise stress tests.

Roles and responsibilities

Senior Managers Regime²

Roles and responsibilities under the ERMF are aligned to the objectives of the Senior Managers Regime. The Group Chief Risk Officer (GCRO) is responsible for the overall development and maintenance of the Group's ERMF and for identifying material risks which the Group may be exposed to. The GCRO delegates effective implementation of the Risk Type Frameworks (RTF) to Risk Framework Owners (RFO), who provide second line of defence oversight for their respective PRTs.

The Risk function

The Risk function provides oversight and challenge on the Group's risk management, ensuring that business is conducted in line with regulatory expectations. The GCRO directly manages the Risk function, which is independent from the origination, trading, and sales functions of the businesses. The Risk function is responsible for:

- proposing the RA for approval by the Board
- maintaining the ERMF, ensuring that it remains relevant and appropriate to the Group's business activities, and is effectively communicated and implemented across the Group
- ensuring that risks are properly assessed, risk and return decisions are transparent and risks are controlled in accordance with the Group's standards and RA
- overseeing and challenging the management of PRTs under the ERMF
- independence of the Risk function by ensuring that the necessary balance in making risk and return decisions is not compromised by short-term pressures to generate revenues.

The Risk function supports the Group's strategy by building a sustainable ERMF that places regulatory and compliance standards, together with culture of appropriate conduct, at the forefront of the Group's agenda.

Our Compliance, Financial Crime and Conduct Risk (CFCR) function,³ works alongside the Risk function within the ERMF to deliver a unified second line of defence. Compliance Risk and Financial Crime Risk, as PRTs, fall under the scope of the CFCR's responsibilities.

Three lines of defence model

The Group applies a three lines of defence model to its day-to-day activities for effective risk management, and to reinforce a strong governance and control environment. Typically:

- Businesses and functions engaged in or supporting revenue generating activities that own and manage risks constitute the first line of defence.

¹ The Group's ERMF and system of internal control applies only to wholly controlled subsidiaries of the Group, and not to associates, joint ventures or structured entities of the Group.

² Senior managers refer to individuals designated as senior management functions under the FCA and PRA Senior Managers Regime.

³ From 1 January 2025, our Conduct, Financial Crime and Compliance (CFCC) function was renamed as Compliance, Financial Crime and Conduct Risk (CFCR).

- Control functions, independent of the first line of defence, that provide oversight and challenge of risk management activities act as the second line of defence.
- Internal Audit acts as the third line of defence, providing independent assurance on the effectiveness of controls supporting the activities of the first and second lines of defence.

Each PRT has an RTF which outlines the areas of governance and risk management and is the formal mechanism through which authorities are delegated. Risk management plans, processes, activities, and resource allocations are consistent with the three lines of defence model prescribed by the ERMF.

Risk identification and assessment

Identification and assessment of potentially adverse risk events is an essential first step in managing the risks of any business or activity. To ensure consistency we use PRTs to classify our risk exposures. However, we also recognise the need to maintain a holistic perspective since:

- a single transaction or activity may give rise to multiple types of risk exposure
- risk concentrations may arise from multiple exposures that are closely correlated
- a given risk exposure may change its form from one risk type to another.

There are also sources of risk that arise beyond our own operations, such as the Group's dependency on suppliers for the provision of services and technology.

As the Group remains accountable for risks arising from the actions of such third parties, failure to adequately monitor and manage these relationships could materially impact the Group's ability to operate.

The Group maintains a taxonomy of risks inherent to the strategy and business model, as well as a risk inventory which captures identified risks, including the Topical and Emerging Risks (TERs) to which the Group is or might be exposed to. Multiple identification and assessment techniques are used to ensure breadth and depth of understanding of the internal and external risk environment, as well as potential opportunities. A risk assessment of the corporate plan is undertaken annually, supplemented by risk assessments of new initiatives. Risk identification findings inform the related risk oversight process, and most importantly RA and controls setting, scenario selection and design, and model refinement and development.

The GCRO and the Group Risk Committee (GRC) regularly review reports on the risk profile for the PRTs, adherence to Group RA, stress test results and the Group risk inventory including TERs.

Risk Appetite and profile

The Group recognises the following constraints which determine the risks that we are willing to take in pursuit of our strategy and the development of a sustainable business:

- Risk capacity is the maximum level of risk the Group can assume, given its current capabilities and resources, before breaching constraints determined by capital and liquidity requirements or the internal operational environment, or otherwise failing to meet the expectations of regulator and law enforcement agencies.

- RA is defined by the Group and approved by the Board. It is the boundary for the risk that the Group is willing to undertake to achieve its strategic objectives and corporate plan. We set RA to enable us to grow sustainably while managing our risks, giving confidence to our stakeholders. The Group RA is supplemented by risk control tools such as granular level limits, policies, and standards to maintain the Group's risk profile within approved RA.

The Board is responsible for approving the RA Statements, which are underpinned by a set of financial and operational control parameters known as RA metrics and their associated thresholds. These set boundaries for the aggregate risk exposures that can be taken across the Group.

The Group RA is reviewed bi-annually to ensure that it is fit for purpose and aligned with strategy, with focus given to new or emerging risks.

Risk Appetite Statement

The Group's objective is to not compromise adherence with its RA in order to pursue revenue growth or higher returns.

See the table on page 198 for the set of RA Statements.

Stress testing

The objective of stress testing is to support the Group in assessing that it:

- does not have exposure to excessive risk concentrations that could produce unacceptably high losses under severe but plausible scenarios
- has sufficient financial resources to withstand severe but plausible scenarios
- has the financial flexibility to respond to extreme but plausible scenarios
- understands key business model risks and considers what kind of event might crystallise those risks – even if extreme and with a low likelihood of occurring
- identifies, as required, actions to mitigate the likelihood or impact of those events
- has set RA metrics at appropriate levels.

Enterprise stress tests incorporate capital and liquidity adequacy stress tests, including recovery and resolution, as well as reverse stress tests.

Stress tests are performed at the Group, country, business, and portfolio level under a wide range of risks and at varying degrees of severity. Unless specifically set by the regulator, scenario design is a bespoke process that aims to explore risks that can adversely impact the Group.

The Board delegates approval of the Bank of England (BoE) stress test submissions to the Board Risk Committee (BRC), which reviews the recommendations from the GRC. Based on the stress test results, the Group Chief Financial Officer (GCFO) and GCRO can recommend strategic actions to the Board to ensure that the Group's strategy remains within RA.

In addition, analysis is run at the PRT level to assess specific risks and concentrations that the Group may be exposed to. These include qualitative assessments such as stressing of credit sectors or portfolios, and quantitative assessments such as potential losses from severe but plausible market risk scenarios or internal stressed liquidity metrics.

Stress testing plays a critical role in assessing the potential impact on portfolio values of extreme but plausible scenarios, leading to potential losses typically much larger than those predicted by the Value at Risk (VaR) model. The Group uses historical and forward-looking scenarios. A common set of scenarios is used across all legal entities complemented in some cases with entity-specific scenarios. RA for market risk stress losses is set at the Group as well as legal entity level.

Non-financial risk types are also stressed to assess the necessary capital requirements under the Operational and Technology RTF.

The Group has also undertaken a number of Climate Risk stress tests, both those mandated by regulators as well as management scenarios.

Principal Risk Types

PRTs are those risks that are inherent in our strategy and business model and have been formally defined in the Group's ERMF. These risks are managed through distinct RTFs which are approved by the GCRO.

The PRTs and associated RA Statements are reviewed annually. The table below shows the Group's current PRTs, their definition and RA Statement.

Principal Risk Types	Definition	Risk Appetite Statement
Credit Risk	Potential for loss due to failure of a counterparty to meet its agreed obligations to pay the Group.	The Group manages its credit exposures following the principle of diversification across products, geographies, client segments and industry sectors.
Traded Risk	Potential for loss resulting from activities undertaken by the Group in financial markets.	The Group should control its financial markets activities to ensure that market and counterparty credit risk losses do not cause material damage to the Group's franchise.
Treasury Risk	Potential for insufficient capital, liquidity, or funding to support our operations, the risk of reductions in earnings or value from movements in interest rates impacting banking book items and the potential for losses from a shortfall in the Group's pension plans.	The Group should maintain sufficient capital, liquidity and funding to support its operations, and an interest rate profile ensuring that the reductions in earnings or value from movements in interest rates impacting banking book items does not cause material damage to the Group's franchise. In addition, the Group should ensure its pension plans are adequately funded.
Operational and Technology Risk	Potential for loss resulting from inadequate or failed internal processes, technology events, human error, or from the impact of external events (including legal risks).	The Group aims to control operational and technology risks to ensure that operational losses (financial or reputational), including any related to the conduct of business matters, do not cause material damage to the Group's franchise.
Information and Cyber Security (ICS) Risk	Risk to the Group's assets, operations, and individuals due to the potential for unauthorised access, use, disclosure, disruption, modification, or destruction of information assets and/or information systems.	The Group aims to mitigate and control ICS risks to ensure that incidents do not cause the Bank material harm, business disruption, financial loss or reputational damage – recognising that while incidents are unwanted, they cannot be entirely avoided.
Financial Crime Risk⁴	Potential for legal or regulatory penalties, material financial loss or reputational damage resulting from the failure to comply with applicable laws and regulations relating to international sanctions, anti-money laundering and anti-bribery and corruption, and fraud.	The Group has no appetite for breaches of laws and regulations related to Financial Crime, recognising that while incidents are unwanted, they cannot be entirely avoided.
Compliance Risk	Potential for penalties or loss to the Group or for an adverse impact to our clients, stakeholders or to the integrity of the markets we operate in through a failure on our part to comply with laws, or regulations.	The Group has no appetite for breaches of laws and regulations related to regulatory non-compliance; recognising that while incidents are unwanted, they cannot be entirely avoided.
Environmental, Social and Governance and Reputational (ESGR) Risk	Potential or actual adverse impact on the environment and/or society, the Group's financial performance, operations, or the Group's name, brand or standing, arising from environmental, social or governance factors, or as a result of the Group's actual or perceived actions or inactions.	The Group aims to measure and manage financial and non-financial risks arising from climate change, reduce emissions in line with our net zero strategy and protect the Group from material reputational damage by upholding responsible conduct and striving to do no significant environmental and social harm.
Model Risk	Potential loss that may occur because of decisions or the risk of misestimation that could be principally based on the output of models, due to errors in the development, implementation, or use of such models.	The Group has no appetite for material adverse implications arising from misuse of models or errors in the development or implementation of models; while accepting some model uncertainty.

⁴ Fraud forms part of the Financial Crime RA Statement but, in line with market practice, does not apply a zero-tolerance approach.

As of November 2024, the Climate Risk RA Statement was integrated into the ESGR PRT.

ERMF effectiveness reviews

The GCRO is responsible for annually affirming the effectiveness of the ERMF to the BRC via an effectiveness review. This review is based on the principle of evidence-based self-assessments for all the RTFs and relevant policies. A top-down review and challenge of the results is conducted by the GCRO with all RFOs and an opinion on the internal control environment is provided by Internal Audit.

The ERMF effectiveness review measures year-on-year progress. The key outcomes of the 2024 review are:

- Continued focus on embedding the ERMF across the organisation.
- Financial risks continue to be effectively managed, and the Group is making good progress in embedding non-financial risk management.
- Self-assessments performed in branches and banking subsidiaries reflect the embeddedness of the ERMF. Country and cluster risk committees continue to play an active role in overseeing and managing risks across our footprint markets.

Ongoing effectiveness reviews allow for a structured approach to identify improvement opportunities and build plans to address them.

In 2025, the Group aims to further strengthen its risk management practices by improving the management of non-financial risks within its businesses, functions and across our footprint. As the regulatory environment continuously changes, the Group constantly monitors regulatory developments and take proactive actions for compliance.

Executive and Board risk oversight

Overview

The corporate governance and committee structure helps the Group to conduct our business. The Board has ultimate responsibility for risk management and approves the ERMF based on the recommendation of the BRC, which also recommends the Group RA Statement for all PRTs and other risks. In addition to the BRC and Audit Committee, the Culture and Sustainability Committee oversees the Group's culture and key sustainability priorities.



See [page 113](#) for the Board and committee governance structure.

Group Risk Committee

The GRC, which derives its authority from the GCRO, is responsible for ensuring the effective management of risk throughout the Group in support of the Group's strategy. The GCRO chairs the GRC, whose members are drawn from the Group Management Team. The GRC oversees the effective implementation of the ERMF for the Group, including the delegation of any part of its authorities to appropriate individuals or sub-committees.

Group Risk Committee sub-committees	Chair	Roles and responsibilities
Group Non-Financial Risk Committee (GNFRC)	Global Head, Operational, Technology and Cyber Risk	Governs the in-scope non-financial risks throughout the Group in support of the ERMF and the Group's strategy.
Group Financial Crime Risk Committee (GFCRC)	Group Head, CFCR	Ensures that the Financial Crime Risk profile (excluding Fraud Risk and Secondary Reputational Risk arising from Financial Crime Risk) is managed within RA and policies.
Group Responsibility and Reputational Risk Committee (GRRRC)	GCRO	Ensures the effective management of Reputational and Sustainability Risk across the Group. This includes providing oversight of matters arising from clients, products, transactions and strategic coverage-related decisions and matters escalated by the respective RFOs.
International Financial Reporting Standards (IFRS) 9 Impairment Committee (IIC)	Co-chaired by the Global Head Enterprise Risk Management (ERM) and Group Head, Central Finance	Ensures the effective management of expected credit loss (ECL) computations, as well as stage allocation of financial assets for quarterly financial reporting.
Model Risk Committee (MRC)	Global Head, ERM	To support the Group strategy by ensuring the effective measurement and management of Model Risk in line with internal policies and model RA.
Investment Committee	Global Head of Stressed Assets Risk	Ensures the optimised wind-down of the Group's non-core direct investment activities in equities, quasi-equities (excluding mezzanine), funds and other alternative investments (excluding debt/debt-like instruments).
SC Ventures (SCV) Risk Committee	CRO, SCV who receives authority directly from the GCRO	Oversees the effective management of risk throughout SCV and the portfolio of controlled entities operating under SCV.
Climate Risk Management Committee (CRMC)	Global Head, ERM	Oversees the effective implementation of the Group's Climate Risk workplan, including relevant regulatory requirements. This includes embedding Climate Risk and net zero oversight across Group businesses, as part of the Group's commitment to manage Climate Risk related financial and non-financial risks.
Regulatory Interpretation Committee (RIC)	Co-chaired by the Global Head ERM and Group Head, Central Finance	Provides oversight of material regulatory interpretations for the Capital Requirements Regulation (as amended by UK legislation), the Prudential Regulatory Authority (PRA) rulebook and other relevant regulations impacting Group regulatory capital calculations and reporting. The areas and risk types in scope are credit risk, traded risk, operational risk, large exposures, leverage ratio and securitisation.

Group Risk Committee sub-committees	Chair	Roles and responsibilities
Digital Assets Risk Committee (DRC)	CRO, SC Ventures & Global Head, Digital Asset Risk	Oversees effective risk management of the Digital Assets (DA) Risk profile of the Group. This includes providing oversight and subject matter expertise of DA Risk matters across the PRTs.
Corporate & Investment Banking Financial Risk Committee (CIBFRC)	Co-Heads CRO CIB and CRO, ASEAN & South Asia	Ensures the effective management of financial risk throughout CIB in support of the Group's strategy.
Wealth & Retail Banking Risk Committee (WRBRC)	Chief Risk Officer, WRB & GCNA	Ensures the effective management of risk throughout WRB in support of the Group's strategy.
HK & GCNA Risk Committee (HK&GCNA RC)	CRO, Hong Kong & GCNA	These committees ensure the effective management of risk in the clusters in support of the Group's strategy.
SG & ASEAN Risk Committee (SG&ASEAN RC)	CRO, Singapore & ASEAN	
Standard Chartered Bank (SCB) India Country Risk Committee (CRC & CNFRC)	CRO, India & South Asia	
UK & Europe Risk Committee (UK & ERC)	CRO & Chief Credit Officer, Europe	
Americas Risk Committee (ARC)	CRO, Americas	
Middle East and Pakistan Risk Committee (MEPRC)	CRO & Regional CCO AME	
Africa Risk Committee	CRO & Regional CCO AME	

Group Asset and Liability Committee

The Group Asset and Liability Committee (GALCO) is chaired by the GCFO. Its members are drawn principally from the Management Team. GALCO is responsible for determining the Group's balance sheet strategy and ensuring that, in executing the Group's strategy, the Group operates within RA and regulatory requirements relating to capital, loss-absorbing capacity, liquidity, leverage, Interest Rate Risk in the Banking Book (IRRBB), Banking Book Basis Risk and Structural Foreign Exchange Risk. It also monitors the structural impact of decisions around sustainable finance, net zero and climate risk. GALCO is also responsible for ensuring that internal and external recovery planning requirements are met.

Principal risks

We manage and control our PRTs through distinct RTFs, policies and RA.

→ See [page 198](#) for the Group's current PRT definitions and Risk Appetite Statements.

Changes impacting PRTs in 2024

In May 2024, to further align with our risk strategy and promote consistency and efficiency, the Operational and Technology Risk and Information and Cyber Security Risk teams were unified under the Operational, Technology and Cyber Risk (OTCR) function. The PRT disclosures and RA Statements for ICS Risk and Operational and Technology Risk remain separate.

Following Tracey McDermott's retirement as Group Head, Conduct, Financial Crime and Compliance at the end of 2024, David Howes has been appointed as Group Head, Compliance, Financial Crime and Conduct Risk (CFCR) from 1 January 2025 and will assume Senior Manager responsibilities for Financial Crime, including the Group Entity Senior Manager Function, Compliance Oversight Function (SMF16) and Money Laundering Reporting Officer (MLRO) role (SMF17).

Credit Risk

Mitigation

Segment-specific policies are in place for Corporate & Investment Banking (CIB) and Wealth & Retail Banking (WRB) which set the principles that must be followed for the end-to-end credit process covering initiation, assessment, documentation, approval, monitoring and governance.

The Group also sets out standards for the eligibility, enforceability, and effectiveness of mitigation arrangements. Potential losses are mitigated using a range of tools, such as collateral, netting agreements, credit insurance, credit derivatives and guarantees.

Risk mitigants are carefully assessed for their market value, legal enforceability, correlation, and counterparty risk of the protection provider. Collateral is valued prior to drawdown and regularly thereafter as required, to reflect current market conditions, the probability of recovery and the period of time to realise the collateral in the event of liquidation. The Group also seeks to diversify its collateral holdings across asset classes and markets.

Where guarantees, credit insurance, standby letters of credit or credit derivatives are used as Credit Risk mitigation, the creditworthiness of the protection provider is assessed and monitored using the same credit process applied to the obligor.

Monitoring

The Group regularly monitors credit exposures, portfolio performance, external trends and emerging risks that may impact risk management outcomes. Internal risk management reports that are presented to risk committees contain information on key political and economic trends across major portfolios and countries, portfolio delinquency and loan impairment performance.

In CIB, clients and portfolios are subject to additional review when they display signs of actual or potential weakness; for example, where there is a decline in the client's position within their industry, financial deterioration, a breach of covenants, or non-performance of an obligation within the stipulated period. Such accounts are subject to a dedicated process overseen by the Credit Issues Committee in the relevant countries where client account strategies and credit grades are re-evaluated. In addition, remedial actions can be undertaken, such as placing accounts on early alert for exposure reduction, security enhancement or exiting the account. Credit-impaired accounts are managed by the Group's specialist recovery unit, Stressed Asset Group (SAG), which is independent of the Client Coverage/Relationship Managers. The Stressed Asset Risk (SAR) Group is the second line risk unit.

On an annual basis, senior members from the CIB business and Risk participate in a more extensive portfolio review (known as the 'industry portfolio review') for certain industry groups. In addition to a review of the portfolio information, this industry portfolio review incorporates industry outlook, key elements of the business strategy, RA, credit profile and emerging and horizon risks. A summary of these industry portfolio reviews is also shared with the CIB Financial Risk Committee.

For WRB, exposures and collateral monitoring are performed at the counterparty and/or portfolio level across different client segments to ensure transactions and portfolio exposures remain within RA. Portfolio delinquency trends are also monitored. Accounts that are past due (or perceived as high risk but not yet past due) are subject to collections or recovery processes managed by a specialist independent function. In some countries, aspects of collections and recovery activities are outsourced. For discretionary lending portfolios, similar processes to those of CIB are followed.

Any material in-country developments that may impact sovereign ratings are monitored closely by Country Risk within the ERM function. The Country Risk Early Warning system, a triage-based risk identification system, categorises countries based on a forward-looking view of possible downgrades and the potential incremental risk-weighted assets (RWA) impact.

In addition, an independent Credit Risk review team within the ERM function performs assessments of the Credit Risk profiles at various portfolio levels. They focus on selected countries and segments through deep dives, comparative analysis, and review and challenge of the basis of credit approvals. The review aims to ensure that the evolving Credit Risk profiles of CIB and WRB are well managed within RA and policies. Results of the reviews are reported to the GRC and BRC.

Credit rating and measurement

All credit proposals are subject to a robust credit risk assessment. It includes a comprehensive evaluation of the client's credit quality, including willingness, ability, and capacity to repay. The primary lending consideration for counterparties is based on their credit quality and operating cash flows, while for individual borrowers it is based on personal income or wealth. The risk assessment gives due consideration to the client's liquidity and leverage position.

Where applicable, the assessment includes a detailed analysis of the Credit Risk mitigation arrangements to determine the level of reliance on such arrangements as the secondary source of repayment in the event of a significant deterioration in a client's credit quality leading to default. Client income, net worth, and the liquidity of asset by class are considered for overall risk assessment for wealth lending. Wealth lending credit limits are subject to the availability of qualified collateral.

A standard alphanumeric Credit Risk grade system is used for CIB, whereby credit grades 1 to 12 are assigned to performing customers, and credit grades 13 and 14 are assigned to non-performing or defaulted customers.

WRB internal ratings-based portfolios use application and behavioural credit scores that are calibrated to generate a probability of default. The Risk Decision Framework uses a credit rating system to define the portfolio/new booking segmentation, shape and decision criteria for the unsecured consumer business segment.

Advanced Internal Ratings-Based (AIRB) models cover the majority of our exposures and are used in assessing risks at a customer and portfolio level, setting strategy, and optimising our risk-return decisions. The Model Risk Committee (MRC) approves material internal ratings-based risk measurement models. Prior to review and approval, all internal ratings-based models are validated by an independent model validation team. Reviews are also triggered if the performance of a model deteriorates materially against predetermined thresholds, measured through the ongoing model performance monitoring process.

We adopt the AIRB approach under the Basel regulatory framework to calculate Credit Risk capital requirements for the majority of our exposures. The Group has also established a global programme to assess capital requirements necessary to be implemented to meet the latest revised Basel III regulation (referred to as Basel 3.1 or Basel IV).

Credit Concentration Risk

Credit Concentration Risk for CIB is managed through concentration limits covering large exposure limit to a single counterparty or a group of connected counterparties (based on control and economic dependence criteria), or at portfolio level for multiple exposures that are closely correlated. Portfolio RA metrics are set, where appropriate, by industry, products, tenor, collateralisation level, top clients, and exposure to holding companies.

For concentrations that are material at a Group level, breaches and potential breaches are monitored by the respective governance committees and reported to the GRC and BRC.

Credit impairment

For CIB, in line with the regulatory guidelines, Stage 3 expected credit loss (ECL) is considered when an obligor is more than 90 days past due on any amount payable to the Group, or the obligor has symptoms of unlikelihood to pay its credit obligations in full as they fall due. These credit-impaired accounts are managed by SAG.

In WRB, loans to individuals and small businesses are considered credit-impaired as soon as any payment of interest or principal is 90 days overdue or they meet other objective evidence of impairment, such as bankruptcy, debt restructuring, fraud, or death, with unlikely continuation of contractual payments. Financial assets are written off, in the amount that is determined to be irrecoverable, when they meet conditions set such that empirical evidence suggests the client is unlikely to meet their contractual obligations, or a loss of principal is reasonably expected.

Estimating the amount and timing of future recoveries involves significant judgement and considers the assessment of matters such as future economic conditions and the value of collateral, for which there may not be a readily accessible market. The total amount of the Group's impairment provision is inherently uncertain, being sensitive to changes in economic and credit conditions across the markets in which the Group operates.



Further details on sensitivity analysis of ECL under IFRS 9 can be found in the 'Risk profile' section on **pages 236 to 246**.

Underwriting

The underwriting of securities and loans is in scope of the CIB RA. Additional limits approved by the GCRO are set on sectoral concentration and maximum holding period. The Underwriting Committee, under the authority of the GCRO, approves individual proposals to underwrite new security issues and loans for our clients. In July 2024, oversight of the Underwriting Committee was transferred from Traded Risk to CIB Credit Risk.

Traded Risk

Mitigation

Traded Risk limits are defined at a level which aims to ensure that the Group remains within RA. The Traded Risk Policy sets the principles that must be followed for the end-to-end traded risk management process including limit setting, risk capture and measurement, limit monitoring and escalation, risk mitigation and stress testing. Policies are reviewed and approved by the Global Head, Traded Risk Management periodically to ensure their ongoing effectiveness.

Market Risk measurement

The Group uses a VaR model to measure the risk of losses arising from future potential adverse movements in market rates, prices, and volatilities. VaR is a quantitative measure of market risk that applies recent historical market conditions to estimate the potential future loss in market value that will not be exceeded in a set time period at a set statistical confidence level.

VaR provides a consistent measure that can be applied across trading businesses and products over time and can be set against actual daily trading profit and loss outcomes.

For day-to-day risk management, VaR is calculated as at the close of business, generally at UK time for expected market movements over one business day and to a confidence level of 97.5 per cent. Intra-day risk levels may vary from those reported at the end of the day.

The Group applies two VaR methodologies:

- **Historical simulation:** this involves the revaluation of all existing positions to reflect the effect of historically observed changes in Market Risk factors on the valuation of the current portfolio. This approach is applied for general Market Risk factors and the majority of specific (credit spread) risk factors. The enhanced Volatility Scaling VaR (VSV) model went live in January 2025, where risk factors' returns are scaled to reflect historical volatility. The VSV model is more responsive to volatility changes observed in the market.
- **Monte Carlo simulation:** this methodology is similar to historical simulation but with considerably more input risk factor observations. These are generated by random sampling techniques, but the results retain the essential variability and correlations of historically observed risk factor changes. This approach is applied for capturing the idiosyncratic credit spread risk factors.

As an input to regulatory capital, trading book VaR is calculated for expected movements over 10 business days and to a confidence level of 99 per cent. Some types of market risk are not captured in the regulatory VaR measure and these risks not in VaR are subject to capital add-ons.



An analysis of VaR results in 2024 is available in the 'Risk profile' section (**pages 247 to 249**).

Counterparty Credit Risk measurement

A Potential Future Exposure (PFE) model is used to measure the credit exposure arising from the positive mark-to-market of traded products. The PFE model provides a quantitative estimate of future potential movements in market rates, prices, and volatilities at a certain confidence level over different time horizons based on the tenor of the transactions.

The Group applies two PFE methodologies: simulation based, which is predominantly used, and an add-on based PFE methodology.

Monitoring

Traded Risk Management monitors the overall portfolio risk and ensures that it is within specified limits and therefore RA. Limits are typically reviewed twice a year.

All material Traded Risks are monitored daily against approved limits. Traded Risk limits apply at all times unless separate intra-day limits have been set.

Treasury Risk

Mitigation

The Group develops policies to address material Treasury Risks and aims to maintain its risk profile within RA. In order to do this, metrics are set against Capital Risk, Liquidity and Funding Risk and IRRBB. Where appropriate, RA metrics are cascaded down to clusters and countries in the form of limits and management action triggers.

Capital Risk

In order to manage Capital Risk, strategic business and capital plans (Corporate Plan) are drawn up covering a five-year horizon and are approved by the Board annually. The plan ensures that adequate levels of capital, including loss-absorbing capacity, and an efficient mix of the different components of capital are maintained to support our strategy and business plans.

Treasury is responsible for the ongoing assessment of the demand for capital and the updating of the Group's capital plan.

RA metrics including capital, leverage, minimum requirement for own funds and eligible liability (MREL) and double leverage are assessed within the Corporate Plan to ensure that the strategy can be achieved within risk tolerances.

Structural Foreign Exchange (FX) Risk

The Group's structural FX position results from the Group's non-US dollar investment in the share capital and reserves of subsidiaries and branches. The FX translation gains or losses are recorded in the Group's translation reserves with a direct impact on the Group's Common Equity Tier 1 ratio.

The Group contracts hedges to manage its structural FX position in accordance with the RA, and as a result the Group has taken net investment hedges to partially cover its exposure to certain non-US dollar currencies to mitigate the FX impact of such positions on its capital ratios.

→ Our structural foreign exchange exposures can be found on [page 249](#).

Liquidity and Funding Risk

At Group, cluster and country level we implement various business-as-usual and stress risk metrics to monitor and manage Liquidity and Funding risk. This ensures that the Group maintains an adequate and well-diversified liquidity buffer, as well as a stable funding base, to meet its liquidity and funding regulatory requirements.

The risk management approach and RA are assessed annually through the Internal Liquidity Adequacy Assessment Process. A funding plan is also developed for efficient liquidity projections to ensure that the Group is adequately funded in the required currencies, to meet its obligations and client funding needs. The funding plan is part of the overall Corporate Plan process aligning to the capital requirements.

→ Further detail on Liquidity and Funding Risk can be found on [pages 250 to 253](#).

Interest Rate Risk in the Banking Book

This risk arises from differences in the repricing profile, interest rate basis, and optionality of banking book assets, liabilities and off-balance sheet items. IRRBB represents an economic and commercial risk to the Group and its capital adequacy. The Group monitors IRRBB against the RA.

→ Further detail on IRRBB can be found on [page 254](#).

Pension Risk

Pension Risk is the potential for loss due to having to meet an actuarially assessed shortfall in the Group's pension plans. Pension Risk arises from the Group's contractual or other liabilities with respect to its occupational pension plans or other long-term benefit obligation. For a funded plan, it represents the risk that additional contributions will need to be made because of a future funding shortfall. For unfunded obligations, it represents the risk that the cost of meeting future benefit payments is greater than currently anticipated.

The Pension Risk is monitored against the RA and reported to the GRC. The RA metric is calculated as the total capital requirement (including both Pillar 1 and Pillar 2A capital) in respect of Pension Risk, expressed as a number of basis points of RWA.

Recovery and resolution planning

In line with PRA requirements, the Group maintains a Recovery Plan, which is a live document to be used by management in the event of stress in order to restore the Group to a stable and sustainable position. The Recovery Plan includes a set of recovery indicators, an escalation framework, and a set of management actions capable of being implemented during a stress. A Recovery Plan is also maintained within each major entity, and all Recovery Plans are subject to periodic fire-drill testing.

As the UK resolution authority, the BoE set a single point of entry bail-in at the ultimate holding company level (Standard Chartered PLC) as the preferred resolution strategy for the Group. In support of this strategy, the Group has a set of capabilities, arrangements, and resources in place to maintain, test and improve resolution capabilities, and continue to meet the required resolvability outcomes on an ongoing basis.

Following the BoE's first resolvability assessment and public disclosure for major UK firms in 2022, the Group submitted its Resolvability Self-Assessment Report to the BoE and PRA, and subsequently published its resolvability public disclosure in August 2024 as part of the second Resolvability Assessment Framework cycle.

Monitoring

On a day-to-day basis, Treasury Risk is managed by Treasury, Finance and country CEOs. The Group regularly reports and monitors Treasury Risk inherent in its business activities and those that arise from internal and external events.

Internal risk management reports covering the balance sheet and the capital and liquidity position are presented to the relevant country Asset and Liability Committee. The reports contain key information on balance sheet trends, exposures against RA and supporting risk measures which enable members to make informed decisions around the overall management of the balance sheet. In addition, an independent Treasury CRO within ERM reviews the prudence and effectiveness of Treasury Risk management.

Pension Risk is managed by the Head of Pensions and Reward Analytics, and monitored by the Global Head, ERM on a periodic basis.

Operational and Technology Risk

Mitigation

The Operational and Technology RTF sets out the Group's overall approach to the management of Operational and Technology Risk in line with the Group's Operational and Technology RA. This is supported by the Risk and Control Self-Assessment (RCSA), which provides a systematic approach for identification and assessment of operational risks, including design and operation of mitigating controls (applicable to all risks as per the Non-Financial Risk Taxonomy).

The RCSA is used to determine the design and operating effectiveness of each process, and requires:

- the recording of end-to-end processes which deliver our key client journey and business outcomes
- the identification of risks to support the achievement of client and business outcomes
- the assessment of inherent risk on the impact to client and business outcomes, and likelihood of occurrence
- the design and monitoring of key controls to effectively and efficiently mitigate prioritised risks within acceptable levels and
- the assessment of residual risk and timely treatment of elevated risks.

Elevated Residual Risks require treatment plans to address the underlying causes and reduce the risks to within the RA.

Monitoring

To deliver services to clients and to participate in the financial services sector, the Group runs processes which are exposed to Operational and Technology risks. The Group prioritises and manages risks which are significant to our clients and to the financial services sectors. The control indicators are regularly monitored to determine the Group's exposure to residual risk.

The residual risk assessments and reporting of events form the Group's Operational and Technology Risk profile. The completeness of the Operational and Technology Risk profile ensures appropriate prioritisation and timeliness of risk decisions, including risk acceptances with treatment plans for risks that exceed acceptable thresholds.

The BRC is informed on adherence to Operational and Technology RA through metrics reported for selected risks. These metrics are monitored, and escalation thresholds are devised based on the materiality and significance of the risk. These Operational and Technology RA metrics are consolidated on a regular basis and reported at the relevant Group committees, providing senior management with the relevant information to inform their risk decisions.

Information and Cyber Security (ICS) Risk

Mitigation

ICS Risk is managed through the ICS RTF, comprising a risk assessment methodology and supporting policy, standards, and methodologies. The ICS Policy and standards are aligned to industry best practice models including the National Institute of Standards and Technology Cyber Security Framework and ISO 27001. We undertake an annual ICS Effectiveness Review to evaluate ICS Risk management practices in alignment with the ERM.

Monitoring

The Group Chief Information Security Officer (CISO) function monitors the evolving threat landscape covering cyber threats, attack vectors and threat actors that could target the Group. This includes performing a threat-led risk assessment to identify key threats, in-scope applications and key controls required to ensure the Group remains within RA.

The ICS Risk profiles of all businesses, functions and countries are consolidated to present a holistic Group-level ICS Risk profile for ongoing monitoring. Mandatory ICS learning, phishing exercises and role-specific training support colleagues to monitor and manage this risk.

During these reviews, the status of each risk is assessed against the Group's controls to identify any changes to impact and likelihood, which affects the overall risk rating.

The Group stress tests its cyber posture through extensive control testing and by executing offensive security testing exercises, including vulnerability testing, code reviews, penetration tests and Red Team attack simulation testing. This testing approach constantly stress tests the Group's defence and approach to cyber security. These show a wider picture of the Group's risk profile, leading to better visibility on potential 'in flight' risks. The Group also tracks remediation of security matters identified by external reviews, such as the BoE CBEST Threat Intelligence-Led Assessment and the Hong Kong Monetary Authority's (HKMA) Intelligence-led Cyber Attack Simulation Testing (iCAST).

The CISO and OTCR functions monitor the ICS Risk profile and ensure that breaches of RA are escalated to the appropriate governance committee or authority levels for remediation and tracking.

Financial Crime Risk

Roles and responsibilities

The Group Head, CFCR is the Group's Compliance and Money-Laundering Reporting Officer and performs the Financial Conduct Authority (FCA) controlled function and senior management function in accordance with requirements set out by the FCA, including those set out in their handbook on systems and controls.

Mitigation

The CFCR function is responsible for the establishment and maintenance of policies, standards, and oversight of first line of defence controls to ensure continued compliance with financial crime laws and regulations, and the mitigation of Financial Crime Risk. In this, the requirements of the Operational and Technology RTF are followed to ensure a consistent approach to the management of processes and controls.

Financial Crime Risk management is built on a risk-based approach, meaning the risk management plans, processes, activities, and resource allocations are determined according to the level of risk.

Risk mitigation takes place through the process of identification of new and amended regulations and the implementation of necessary process and control changes to address these.

Monitoring

The Group monitors enterprise-wide financial crime risks through the Financial Crime Risk Assessment. This is undertaken annually to assess the inherent financial crime risk exposures and the associated processes and controls by which these exposures are mitigated.

Financial Crime Risk controls are governed in line with the Operational and Technology RTF. The Group has a monitoring and reporting process in place for Financial Crime Risk, which includes escalation and reporting to the CFCR and relevant risk committees.

While not a formal governance committee, the CFCR Oversight Group provides oversight of CFCR risks including the effective implementation of the Financial Crime RTF. It also provides oversight, challenge and direction to CFCR policy owners on material changes and positions taken in CFCR-owned policies, including issues relating to regulatory interpretation and Group's CFCR RA. The Regulatory Change Oversight Forum provides visibility and oversight of material and/or complex large-scale regulatory change emanating from financial services regulators impacting non-financial risks.



Further details on how we manage financial crime can be found on [page 96](#).

Compliance Risk

Roles and responsibilities

All activities that the Group engages in must comply with the relevant country/local specific and extraterritorial regulations.

Compliance Risk includes the risks associated with a failure to comply with all regulations that are applicable to the Group regardless of the issuing regulatory authority. Where Compliance Risk arises, or could arise, from failure to manage another PRT, the oversight and management processes for that specific PRT must be followed, to ensure that effective oversight and challenge of the first line of defence can be provided by the appropriate second line of defence function.

Areas of regulation can be broadly divided into two distinct categories: those issued by financial service regulatory authorities and those issued by non-financial service regulators. The Group is exposed to both categories of regulation, and roles and responsibilities differ depending on the category. For regulations issued by financial services regulatory authorities and other regulators that may issue regulations pertaining to Compliance Risk, CFCR identifies new and amended regulations as and when issued and communicates the relevant regulatory obligations to the country RFO delegate. The areas where CFCR does not act in a second line of defence capacity are specified in the respective RTF with appropriate ownership.

Each of the assigned second line of defence functions have responsibilities, including monitoring relevant regulatory developments from non-financial services regulators at both Group and country levels, policy development, implementation, and validation as well as oversight and challenge of first line of defence processes and controls.

Mitigation

The CFCR function is responsible for the establishment and maintenance of policies, standards, and oversight of the first line of defence controls to ensure compliance with laws and regulations, and the mitigation of Compliance Risk. In this, the requirements of the Operational and Technology RTF are followed to ensure a consistent approach to the management of processes and controls.

Monitoring

The monitoring of controls designed to mitigate the risk of regulatory non-compliance in processes is governed in line with the Operational and Technology RTF. Compliance Risk reporting includes escalation and reporting to the CFCR and relevant risk committees.

While not a formal governance committee, the CFCR Oversight Group provides oversight of CFCR risks including the effective implementation of the Compliance RTF, and oversight, challenge and direction to CFCR policy owners on material changes and positions taken in CFCR-owned policies, including issues relating to regulatory interpretation and the Group's CFCR RA. The Regulatory Change Oversight Forum provides visibility and oversight of material and/or complex large-scale regulatory change emanating from financial services regulators impacting non-financial risks.

Environmental, Social and Governance and Reputational (ESGR) Risk

Mitigation

The ESGR RTF provides the overall risk management approach for Environmental, Social and Governance (ESG) and Reputational risks.

The ESG Risk policy outlines the Group's commitment to integrating ESG considerations into its business, operations, and decision-making process. The policy sets out the requirements for identifying, assessing, and managing ESG risks, including Climate Risk.

The Reputational Risk policy sets out the principal sources of reputational risk driven by negative shifts in stakeholder perceptions, as well as the responsibilities for managing Reputational Risk arising out of client onboarding and due diligence, from transactions, product design and product features, or strategic coverages such as exposure to sensitive industries, markets, or investments. Whenever potential for stakeholder concerns is identified, issues are subject to review and decision by both the first and second lines of defence. The Reputational Risk policy also sets out the key considerations for mitigating greenwashing risk that can arise during product and/or deal lifecycle, sustainability reporting and disclosures, and external campaigns related to sustainability themes.

Monitoring

Exposure to reputational risks arising from transactions, clients, products and strategic coverage is monitored through established triggers to prompt the appropriate risk-based considerations and assessment by the first line of defence and escalations to the second line of defence. Risk acceptance decisions and thematic trends are also reviewed on a periodic basis.

Exposure to ESG Risks is monitored through triggers embedded within the first line of defence processes. The environmental and social risks are considered for clients and transactions via Environmental and Social Risk Assessments and/or Climate Risk Assessments (CRAs). Vendors that are presenting as high risk are assessed for modern slavery risk. Based on responses provided by the supplier at onboarding, those that meet the high-risk category-country combinations are subjected to further risk assessment.

Exposure to Climate Risk is monitored in conjunction with other PRTs. We have embedded qualitative and quantitative climate considerations into the Group's Credit Underwriting Principles for Oil and Gas, Mining, Shipping, Commercial Real Estate and Project Finance portfolio. We have expanded coverage of Climate and Credit Risk considerations to physical collateral, as they serve as key risk mitigants, especially in default events. We assess physical risk concentrations for our WRB portfolio on a quarterly basis and assess the physical risk vulnerabilities of our sites periodically and when new sites are onboarded.

Our Net Zero Climate Risk Working Forum meets quarterly to discuss account plans for high climate risk and net zero divergent clients. Stress testing and scenario analysis are used to assess the impact of ESGR-related risks. The impact on capital requirements has been included in the PLC Group Internal Capital Adequacy Assessment Process. Management information is reviewed at a quarterly frequency and any breaches in RA are reported to the GRC and BRC.

Model Risk

Mitigation

The Model Risk Policy and Standards define requirements for model development, validation, implementation and use, including regular model performance monitoring and, where required, model risk mitigants.

Model deficiencies identified through the development or validation process, or model performance issues identified through ongoing monitoring, are mitigated through respective model risk mitigants. Mitigants include model overlays as either post-model adjustments (PMAs) or management adjustments, model restrictions and potentially a model recalibration or redevelopment, all of which undergo independent review, challenge, and approval. PMAs are used to address observed deficiencies caused from within the model, by adjusting the model output either directly or indirectly (e.g. adjusting parameters). Where a PMA is applied as a mitigant for a model used in Pillar 1 or Pillar 2 calculations or models with material impact on financial accounting disclosures (e.g. IFRS 9), the independent review must be performed by Group Model Validation (GMV) with sign-off from the Model Approver prior to implementation. Management adjustments are used to address issues by applying management decisions without adjusting a direct modelling component.

As with all PRTs, operational controls are used to govern all Model Risk-related processes, with regular risk assessments performed to assess appropriateness and effectiveness of those controls, in line with the Operational and Technology RTF, with remediation plans implemented where necessary. Group Model Risk Policy and Standards also define requirements for deterministic quantitative methods (DQMs) that are used as part of an end-to-end modelled process. DQMs are similar in nature to a model, however the processing component is either purely deterministic or has an element of expert judgement. Unlike a model, there is no use of statistical, economic financial or mathematical theories.

The regulatory framework around Model Risk is continuously evolving, the PRA's Supervisory Statement 1/23 (SS1/23) is an example. The Group proactively monitors regulatory changes to take the required actions timely for compliance. Regarding SS1/23, the Group is currently delivering to a roadmap to compliance, which commenced in 2024 and will continue over the next two years.

Monitoring

The Group monitors Model Risk via a set of RA metrics. Adherence to Model RA and any threshold breaches are reported to the BRC, GRC and MRC. These metrics and thresholds are reviewed twice per year to ensure that threshold calibration remains appropriate, and the themes adequately cover the current risks.

Models undergo regular performance monitoring based on their level of perceived Model Risk, with monitoring results presented, and breaches escalated to the Model Sponsor, Model Owner, GMV and respective MRC or Individual Delegated Model Approvers.

Model Risk management produces Model Risk reports covering the model landscape, which include performance metrics, identified model issues and remediation plans. These are presented for discussion at the Model Risk governance committees on a regular basis.

Risk profile

Credit Risk (audited)

Basis of preparation

Unless otherwise stated, the balance sheet and income statement information presented within this section is based on the Group's management view. This is principally the location from which a client relationship is managed, which may differ from where it is financially booked and may be shared between businesses and/or regions. This view reflects how the client segments and regions are managed internally.

Loans and advances to customers and banks held at amortised cost in this 'Risk profile' section include reverse repurchase agreement balances held at amortised cost, per Note 16 Reverse repurchase and repurchase agreements including other similar secured lending and borrowing.

Credit Risk overview

Credit Risk is the potential for loss due to the failure of a counterparty to meet its contractual obligations to pay the Group. Credit exposures arise from both the banking and trading books.

Impairment model

IFRS 9 mandates an impairment model that requires the recognition of expected credit losses (ECL) on all financial debt instruments held at amortised cost, Fair Value through Other Comprehensive Income (FVOCI), undrawn loan commitments and financial guarantees.

Staging of financial instruments

Financial instruments that are not already credit-impaired are originated into stage 1 and a 12-month ECL provision is recognised.

Instruments will remain in stage 1 until they are repaid, unless they experience significant credit deterioration (stage 2) or they become credit-impaired (stage 3).

Instruments will transfer to stage 2 and a lifetime ECL provision is recognised when there has been a significant change in the Credit Risk compared to what was expected at origination.

The framework used to determine a Significant Increase in Credit Risk (SICR) is set out below.

Stage 1

- 12-month ECL
- Performing

Stage 2

- Lifetime expected credit loss
- Performing but has exhibited SICR

Stage 3

- Credit-impaired
- Non-performing

IFRS 9 ECL principles and approaches

The main methodology principles and approach adopted by the Group are set out in the following table.

Title	Supplementary Information	Page
Approach for determining ECL	<ul style="list-style-type: none"> • IFRS 9 ECL methodology • Application of lifetime ECL 	236 236
Key assumptions and judgements in determining ECL	<ul style="list-style-type: none"> • Incorporation of forward-looking information • Forecast of key macroeconomic variables underlying the ECL calculation and the impact of non-linearity • Impact of multiple economic scenarios • Judgemental adjustments and management overlays • Sensitivity of ECL calculation to macroeconomic variables 	238 238 241 241 242
Significant increase in Credit risk (SICR)	<ul style="list-style-type: none"> • Quantitative and qualitative criteria 	244
Assessment of credit-impaired financial assets	<ul style="list-style-type: none"> • Wealth and Retail Banking (WRB) clients • Corporate and Investment Banking (CIB) and Private Banking clients • Write-offs 	245 245 245
Transfers between stages	<ul style="list-style-type: none"> • Movement in gross exposures and credit impairment 	219
Modified financial assets	<ul style="list-style-type: none"> • Forborne and other modified loans 	226
Governance of PMAs and application of expert credit judgement in respect of ECL	<ul style="list-style-type: none"> • IFRS 9 Impairment Committee 	246

Summary of Credit Risk performance

Maximum exposure

The Group's on-balance sheet maximum exposure to Credit Risk increased by \$25 billion to \$823 billion (31 December 2023: \$798 billion). Cash and balances at Central banks decreased by \$6.5 billion to \$63 billion (31 December 2023: \$70 billion) due to reduced placements. Loans to banks held at amortised cost decreased by \$1.4 billion to \$44 billion (31 December 2023:

\$45 billion). Fair value through profit and loss increased by \$27.8 billion to \$172 billion (31 December 2023: \$144 billion), largely due to increases in debt securities and reverse repos, but this was partially offset by a \$16.7 billion reduction in debt securities not held at fair value through profit and loss. Loans and advances to customers decreased by \$5.9 billion to \$281 billion (31 December 2023: \$287 billion), due to a reduction in mortgages in Korea, Singapore and Hong Kong, given continued headwinds, including foreign currency movements.

Loans and advances to customers in the CIB segment increased by \$7.6 billion, mainly due to the execution of pipeline deals in Global Banking, but this was offset by a \$7.4 billion decrease in Central and other items. Derivative financial instruments increased by \$31 billion to \$81 billion (31 December 2023: \$50 billion). Off-balance sheet instruments increased by \$16 billion to \$273 billion (31 December 2023: \$257 billion), due to an increase in financial guarantees and other equivalents, which was driven by new business.

→ Further details can be found in the 'Maximum exposure to Credit Risk' section on [page 209](#); 'Credit quality by client segment' section on [page 212](#).

Loans and advances

94 per cent (31 December 2023: 94 per cent) of the Group's gross loans and advances to customers remain in stage 1 at \$269 billion (31 December 2023: \$274 billion), reflecting our continued focus on high-quality origination. For WRB, stage 1 balances decreased by \$6.5 billion to \$117 billion (31 December 2023: \$123 billion), of which \$5.9 billion was mainly due to a reduction in the mortgage portfolios in Korea, Singapore and Hong Kong, mainly driven by slower booking momentum and higher attrition as a result of intense interest rate competition. For CIB, stage 1 balances increased by \$8 billion to \$129 billion (31 December 2023: \$121 billion) mainly driven by the Energy, Financing, Insurance and Transport sectors. For Central and other items, stage 1 balances decreased by 6.3 billion to \$22 billion (31 December 2023: \$28 billion) due to a reduction in exposures to the Government sector, across a number of our markets.

Stage 2 loans and advances to customers decreased by \$0.6 billion to \$11 billion (31 December 2023: \$11 billion). For WRB, stage 2 balances decreased by \$0.4 billion to \$1.9 billion (31 December 2023: \$2.3 billion), due to decrease in the mortgage portfolio. For Central and other items, higher risk exposures decreased by \$0.9 billion to \$0.1 billion (31 December 2023: \$1 billion), was due to the maturity of short-term loan exposures that were replaced with debt securities in Pakistan.

Stage 3 loans and advances decreased by \$1 billion to \$6.2 billion (31 December 2023: \$7.2 billion) due to debt sales, repayments, write-offs and upgrades to Stage 2 loans in CIB. WRB stage 3 balances remained broadly stable at \$1.6 billion (31 December 2023: \$1.5 billion). For Central and other items, stage 3 balances decreased by \$0.1 billion to \$0.1 billion (31 December 2023: \$0.2 billion).

→ Further details can be found in the 'Analysis of financial instruments by stage' section on [page 210](#); 'Credit quality by client segment' section on [page 212](#); 'Credit quality by industry' section on [page 230](#).

Analysis of Stage 2

The key SICR driver which caused exposures to be classified as stage 2 remains an increase in probability of default (PD). The proportion of CIB exposures in stage 2 decreased due to a reduction in clients placed on non-purely precautionary early alert that have not breached PD thresholds. In WRB, the exposures in stage 2 loans with more than 30 days past due remained stable at \$0.3 billion (31 December 2023: \$0.3 billion). In Central and other items, the \$0.5 billion decrease in CG12 balances to \$1.5 billion (31 December 2023: \$2 billion) was due to the maturity of short-term loan exposures that were replaced with debt securities in Pakistan. 'Others' category includes exposures where origination data is incomplete and the exposures are allocated into stage 2.

→ Further details can be found in the 'Credit quality by client segment' section in [page 212](#); 'Analysis of stage 2 balances' section on [page 225](#).

Credit impairment charges

The Group's ongoing credit impairment was a net charge of \$547 million (31 December 2023: \$508 million).

WRB contributed a net charge of \$644 million (31 December 2023: \$354 million), driven by a higher interest rate environment impacting repayments on credit cards and personal loans and to a few non-repeating ECL releases recorded in 2023. The increase in impairments was also due to the maturity and portfolio growth of digital partnerships in China and Indonesia, as well as a \$21 million overlay arising from the settlement failure of two e-commerce platforms in Korea.

CIB contributed a net release of \$106 million (31 December 2023: \$123 million charge) due to a number of stage 3 releases and repayments.

→ Further details can be found in the 'Financial review' section on [page 51](#); 'Credit impairment charge' section on [page 226](#).

Commercial Real Estate (CRE)

The Group provides loans to CRE counterparties of which \$8.8 billion is to counterparties in the CIB segment where the source of repayment is substantially derived from rental or sale of real estate and is secured by real estate collateral. The remaining CRE loans comprise working capital loans to real estate corporates, loans with non-property collateral, unsecured loans and loans to real estate entities of diversified conglomerates. The average LTV ratio of the performing book CRE portfolio has increased to 54 per cent (31 December 2023: 52 per cent). The proportion of loans with an LTV greater than 80 per cent has increased to 4 per cent (31 December 2023: 3 per cent).

China CRE

Total exposure to China CRE decreased by \$0.6 billion to \$2 billion (31 December 2023: \$2.6 billion) mainly from exposure reductions. The proportion of credit impaired exposures increased to 70 per cent (31 December 2023: 58 per cent) due to repayments within the non-credit impaired portfolio. The overall provision coverage increased to 87 per cent (31 December 2023: 72 per cent), reflecting increased provision charges during the year. The proportion of the loan book rated as Higher Risk increased to 3 per cent (31 December 2023: 0.3 per cent) primarily due to downgrades during the year.

The Group continues to hold a judgemental management overlay, which decreased by \$71 million to \$70 million (31 December 2023: \$141 million), reflecting repayments and utilisations during the year.

The Group is further indirectly exposed to China CRE through its associate investment in China Bohai Bank.

→ Further details can be found in the 'China commercial real estate' section on [page 234](#); 'Judgemental adjustments' section on [page 241](#).

High carbon sectors

With the Group's expansion in the asset-backed lending business, the total on-and-off balance sheet exposure for the Aviation sector increased to \$2.6 billion (31 December 2023: \$1.9 billion), while the Shipping sector decreased to \$4.6 billion (31 December 2023: \$5 billion). The Group's position statements mandates that for newer vessels and aircraft, only carbon efficient ones can be financed.

While exposures to the Oil and Gas sector increased to \$21 billion (31 December 2023: \$20 billion) due to increased funding towards more emissions-efficient counterparties, exposures to the Power sector increased to \$11 billion (31 December 2023: \$9 billion) due to increased lending to renewables and efficient gas generation counterparties.

→ Further details on net zero targets and progress in managing transition risk of the high carbon sectors can be found in the 'Sustainability review' section on [page 57](#); 'High carbon sectors' section on [page 232](#).

Maximum exposure to Credit Risk (audited)

The table below presents the Group's maximum exposure to Credit Risk for its on-balance sheet and off-balance sheet financial instruments as at 31 December 2024, before and after taking into account any collateral held or other Credit Risk mitigation.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

	2024				2023			
	Credit risk management				Credit risk management			
	Maximum exposure \$million	Collateral ⁸ \$million	Master netting agreements \$million	Net Exposure \$million	Maximum exposure \$million	Collateral ⁸ \$million	Master netting agreements \$million	Net Exposure \$million
On-balance sheet								
Cash and balances at central banks	63,447	–	–	63,447	69,905	–	–	69,905
Loans and advances to banks ¹	43,593	2,946	–	40,647	44,977	1,738	–	43,239
of which – reverse repurchase agreements and other similar secured lending ⁷	2,946	2,946	–	–	1,738	1,738	–	–
Loans and advances to customers ¹	281,032	119,047	–	161,985	286,975	118,492	–	168,483
of which – reverse repurchase agreements and other similar secured lending ⁷	9,660	9,660	–	–	13,996	13,996	–	–
Investment securities – Debt securities and other eligible bills ²	143,562	–	–	143,562	160,263	–	–	160,263
Fair value through profit or loss ^{3,7}	172,031	86,195	–	85,836	144,276	81,847	–	62,429
Loans and advances to banks	2,213	–	–	2,213	2,265	–	–	2,265
Loans and advances to customers	7,084	–	–	7,084	7,212	–	–	7,212
Reverse repurchase agreements and other similar lending ⁷	86,195	86,195	–	–	81,847	81,847	–	–
Investment securities – Debt securities and other eligible bills ²	76,539	–	–	76,539	52,952	–	–	52,952
Derivative financial instruments ^{4,7}	81,472	15,005	60,280	6,187	50,434	8,440	39,293	2,701
Accrued income	2,776	–	–	2,776	2,673	–	–	2,673
Assets held for sale ⁹	889	–	–	889	701	–	–	701
Other assets ⁵	34,585	–	–	34,585	38,140	–	–	38,140
Total balance sheet	823,387	223,193	60,280	539,914	798,344	210,517	39,293	548,534
Off-balance sheet⁶								
Undrawn Commitments	182,529	2,489	–	180,040	182,390	2,940	–	179,450
Financial Guarantees and other equivalents	90,632	1,807	–	88,825	74,414	2,590	–	71,824
Total off-balance sheet	273,161	4,296	–	268,865	256,804	5,530	–	251,274
Total	1,096,548	227,489	60,280	808,779	1,055,148	216,047	39,293	799,808

1 Amounts are net of ECL provisions. An analysis of credit quality is set out in the credit quality analysis section (page 212). Further details of collateral held by client segment and stage are set out in the collateral analysis section (page 227). The Group also has credit mitigation through Credit Linked Notes as set out on page 229

2 Excludes equity and other investments of \$994 million (31 December 2023: \$992 million). Further details are set out in Note 13 financial instruments

3 Excludes equity and other investments of \$5,486 million (31 December 2023: \$2,940 million). Further details are set out in Note 13 financial instruments

4 The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions

5 Other assets include Hong Kong certificates of indebtedness, cash collateral, and acceptances, in addition to unsettled trades and other financial assets

6 Excludes ECL provisions of \$255 million (31 December 2023: \$227 million) which are reported under Provisions for liabilities and charges

7 Collateral capped at maximum exposure (over-collateralised)

8 Adjusted for over-collateralisation, which has been determined with reference to the drawn and undrawn component as this best reflects the effect on the amount arising from expected credit losses

9 The amount is after ECL provisions. Further details are set out in Note 21 Assets held for sale and associated liabilities

Analysis of financial instruments by stage (audited)

The table below presents the gross and credit impairment balances by stage for the Group's amortised cost and FVOCI financial instruments as at 31 December 2024.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

	2024											
	Stage 1			Stage 2			Stage 3			Total		
	Gross balance¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impairment \$million	Net carrying value \$million
Cash and balances at central banks	62,597	–	62,597	432	(4)	428	426	(4)	422	63,455	(8)	63,447
Loans and advances to banks (amortised cost)	43,208	(10)	43,198	318	(1)	317	83	(5)	78	43,609	(16)	43,593
Loans and advances to customers (amortised cost)	269,102	(483)	268,619	10,631	(473)	10,158	6,203	(3,948)	2,255	285,936	(4,904)	281,032
Debt securities and other eligible bills⁵	141,862	(23)		1,614	(4)		103	(2)		143,579	(29)	
Amortised cost	54,637	(15)	54,622	475	(2)	473	42	–	42	55,154	(17)	55,137
FVOCI²	87,225	(8)		1,139	(2)		61	(2)		88,425	(12)	–
Accrued income (amortised cost)⁴	2,776		2,776			–			–	2,776	–	2,776
Assets held for sale⁴	840	(7)	833	38	–	38	58	(45)	13	936	(52)	884
Other assets	34,585	–	34,585	–	–	–	3	(3)	–	34,588	(3)	34,585
Undrawn commitments³	178,516	(50)		4,006	(52)		7	(1)		182,529	(103)	
Financial guarantees, trade credits and irrevocable letter of credits³	87,991	(16)		2,038	(7)		603	(129)		90,632	(152)	
Total	821,477	(589)		19,077	(541)		7,486	(4,137)		848,040	(5,267)	

1 Gross carrying amount for off-balance sheet refers to notional values

2 These instruments are held at fair value on the balance sheet. The ECL provision in respect of debt securities measured at FVOCI is held within the OCI reserve

3 These are off-balance sheet instruments. Only the ECL is recorded on-balance sheet as a financial liability and therefore there is no "net carrying amount". ECL allowances on off-balance sheet instruments are held as liability provisions to the extent that the drawn and undrawn components of loan exposures can be separately identified. Otherwise they will be reported against the drawn component

4 Stage 1 ECL is not material

5 Stage 3 gross includes \$59 million (31 December 2023: \$80 million) originated credit-impaired debt securities with impairment of \$Nil million (31 December 2023: \$14 million)

	Stage 1			Stage 2			Stage 3			Total		
	Gross balance¹ \$million	Total credit impair- ment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impair- ment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impair- ment \$million	Net carrying value \$million	Gross balance¹ \$million	Total credit impair- ment \$million	Net carrying value \$million
Cash and balances at central banks	69,313	–	69,313	207	(7)	200	404	(12)	392	69,924	(19)	69,905
Loans and advances to banks (amortised cost)	44,384	(8)	44,376	540	(10)	530	77	(6)	71	45,001	(24)	44,977
Loans and advances to customers (amortised cost)	273,692	(430)	273,262	11,225	(420)	10,805	7,228	(4,320)	2,908	292,145	(5,170)	286,975
Debt securities and other eligible bills⁵	158,314	(26)		1,860	(34)		164	(61)		160,338	(121)	
Amortised cost	56,787	(16)	56,771	103	(2)	101	120	(57)	63	57,010	(75)	56,935
FVOCI²	101,527	(10)		1,757	(32)		44	(4)		103,328	(46)	
Accrued income (amortised cost)⁴	2,673		2,673			–			–	2,673	–	2,673
Assets held for sale⁴	661	(33)	628	76	(4)	72	1	–	1	738	(37)	701
Other assets	38,139	–	38,139	–	–	–	4	(3)	1	38,143	(3)	38,140
Undrawn commitments³	176,654	(52)		5,733	(39)		3	–		182,390	(91)	
Financial guarantees, trade credits and irrevocable letter of credits³	70,832	(10)		2,910	(14)		672	(112)		74,414	(136)	
Total	834,662	(559)		22,551	(528)		8,553	(4,514)		865,766	(5,601)	

1 Gross carrying amount for off-balance sheet refers to notional values

2 These instruments are held at fair value on the balance sheet. The ECL provision in respect of debt securities measured at FVOCI is held within the OCI reserve

3 These are off-balance sheet instruments. Only the ECL is recorded on-balance sheet as a financial liability and therefore there is no “net carrying amount”.
ECL allowances on off-balance sheet instruments are held as liability provisions to the extent that the drawn and undrawn components of loan exposures can be separately identified. Otherwise they will be reported against the drawn component

4 Stage 1 ECL is not material

5 Stage 3 gross includes \$80 million originated credit-impaired debt securities with impairment of \$14 million

Credit quality analysis (audited)

Credit quality by client segment

For CIB, exposures are analysed by credit grade (CG), which plays a central role in the quality assessment and monitoring of risk. All loans are assigned a CG, which is reviewed periodically and amended in light of changes in the borrower's circumstances or behaviour. CGs 1 to 12 are assigned to stage 1 and stage 2 (performing) clients or accounts, while CGs 13 and 14 are assigned to stage 3 (credit-impaired) clients. Consumer and Business Banking portfolios are analysed by days past due and Private Banking by the type of collateral held.

Mapping of credit quality

The Group uses the following internal risk mapping to determine the credit quality for loans.

Credit quality description	Internal grade mapping	Corporate & Investment Banking		Private Banking ¹	Wealth & Retail Banking ⁴
		S&P external ratings equivalent	Regulatory PD range (%)	Internal ratings	Internal grade mapping
Strong	1A to 5B	AAA/AA+ to BBB-/BB+ ²	0 to 0.425	Class I and Class IV	Current loans (no past dues nor impaired)
Satisfactory	6A to 11C	BB to CCC+ ³	0.426 to 15.75	Class II and Class III	Loans past due till 29 days
Higher risk	Grade 12	CCC+ to C	15.751 to 99.999	Stressed Assets Group (SAG) Managed	Past due loans 30 days and over till 90 days

1 For Private Banking, classes of risk represent the type of collateral held. Class I represents facilities with liquid collateral, such as cash and marketable securities. Class II represents unsecured/partially secured facilities and those with illiquid collateral, such as equity in private enterprises. Class III represents facilities with residential or commercial real estate collateral. Class IV covers margin trading facilities

2 Banks' rating: AAA/AA+ to BB+/BB. Sovereigns' rating: AAA to BB+

3 Banks' rating: BB to "CCC+ to C". Sovereigns' rating: BB+/BB to B-/CCC+

4 Wealth & Retail Banking excludes Private Banking. Medium enterprise clients within Business Banking are managed using the same internal credit grades as CIB

The table below sets out the gross loans and advances held at amortised cost, ECL provisions and expected credit loss coverage by business segment and stage. ECL coverage represents the ECL reported for each segment and stage as a proportion of the gross loan balance for each segment and stage.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

Loans and advances by client segment (audited)

	2024							
	Customers						Undrawn commitments \$million	Financial Guarantees \$million
Amortised cost	Banks \$million	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Ventures \$million	Central & other items \$million	Customer Total \$million		
Stage 1	43,208	128,746	117,015	1,383	21,958	269,102	178,516	87,991
– Strong	31,239	90,725	111,706	1,367	21,540	225,338	162,574	56,070
– Satisfactory	11,969	38,021	5,309	16	418	43,764	15,942	31,921
Stage 2	318	8,643	1,905	48	35	10,631	4,006	2,038
– Strong	8	1,229	1,413	31	–	2,673	994	471
– Satisfactory	125	6,665	155	6	–	6,826	2,862	1,403
– Higher risk	185	749	337	11	35	1,132	150	164
Of which (stage 2):								
– Less than 30 days past due	–	55	155	6	–	216	–	–
– More than 30 days past due	2	7	337	11	–	355	–	–
Stage 3, credit-impaired financial assets	83	4,476	1,617	12	98	6,203	7	603
Gross balance¹	43,609	141,865	120,537	1,443	22,091	285,936	182,529	90,632
Stage 1	(10)	(80)	(383)	(20)	–	(483)	(50)	(16)
– Strong	(7)	(28)	(325)	(18)	–	(371)	(33)	(7)
– Satisfactory	(3)	(52)	(58)	(2)	–	(112)	(17)	(9)
Stage 2	(1)	(303)	(147)	(23)	–	(473)	(52)	(7)
– Strong	–	(41)	(70)	(14)	–	(125)	(10)	–
– Satisfactory	(1)	(218)	(32)	(3)	–	(253)	(32)	(4)
– Higher risk	–	(44)	(45)	(6)	–	(95)	(10)	(3)
Of which (stage 2):								
– Less than 30 days past due	–	(1)	(32)	(3)	–	(36)	–	–
– More than 30 days past due	–	–	(45)	(6)	–	(51)	–	–
Stage 3, credit-impaired financial assets	(5)	(3,178)	(759)	(11)	–	(3,948)	(1)	(129)
Total credit impairment	(16)	(3,561)	(1,289)	(54)	–	(4,904)	(103)	(152)
Net carrying value	43,593	138,304	119,248	1,389	22,091	281,032		
Stage 1	0.0%	0.1%	0.3%	1.4%	0.0%	0.2%	0.0%	0.0%
– Strong	0.0%	0.0%	0.3%	1.3%	0.0%	0.2%	0.0%	0.0%
– Satisfactory	0.0%	0.1%	1.1%	12.5%	0.0%	0.3%	0.1%	0.0%
Stage 2	0.3%	3.6%	7.7%	47.9%	0.0%	4.4%	1.3%	0.3%
– Strong	0.0%	3.3%	5.0%	45.2%	0.0%	4.7%	1.0%	0.0%
– Satisfactory	0.8%	3.3%	20.6%	50.0%	0.0%	3.7%	1.1%	0.3%
– Higher risk	0.0%	5.9%	13.4%	54.5%	0.0%	8.4%	6.7%	1.8%
Of which (stage 2):								
– Less than 30 days past due	0.0%	1.8%	20.6%	50.0%	0.0%	16.7%	0.0%	0.0%
– More than 30 days past due	0.0%	0.0%	13.4%	54.5%	0.0%	14.4%	0.0%	0.0%
Stage 3, credit-impaired financial assets (S3)	6.0%	71.0%	46.9%	91.7%	0.0%	63.6%	14.3%	21.4%
– Stage 3 Collateral	1	297	584	–	–	881	–	46
– Stage 3 Cover ratio (after collateral)	7.2%	77.6%	83.1%	91.7%	0.0%	77.8%	14.3%	29.0%
Cover ratio	0.0%	2.5%	1.1%	3.7%	0.0%	1.7%	0.1%	0.2%
Fair value through profit or loss								
Performing	36,967	58,506	6	–	–	58,512	–	–
– Strong	30,799	38,084	3	–	–	38,087	–	–
– Satisfactory	6,158	20,314	3	–	–	20,317	–	–
– Higher risk	10	108	–	–	–	108	–	–
Defaulted (CG13-14)	–	13	–	–	–	13	–	–
Gross balance (FVTPL)²	36,967	58,519	6	–	–	58,525	–	–
Net carrying value (incl FVTPL)	80,560	196,823	119,254	1,389	22,091	339,557	–	–

1 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$9,660 million under Customers and of \$2,946 million under Banks, held at amortised cost

2 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$51,441 million under Customers and of \$34,754 million under Banks, held at fair value through profit or loss

2023

		Customers						
	Banks \$million	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Ventures \$million	Central & other items \$million	Customer Total \$million	Undrawn commitments \$million	Financial Guarantees \$million
Amortised cost								
Stage 1	44,384	120,886	123,486	1,015	28,305	273,692	176,654	70,832
– Strong	35,284	84,248	118,193	1,000	27,967	231,408	162,643	47,885
– Satisfactory	9,100	36,638	5,293	15	338	42,284	14,011	22,947
Stage 2	540	7,902	2,304	54	965	11,225	5,733	2,910
– Strong	55	1,145	1,761	34	–	2,940	1,090	830
– Satisfactory	212	5,840	206	7	–	6,053	4,169	1,823
– Higher risk	273	917	337	13	965	2,232	474	257
Of which (stage 2):								
– Less than 30 days past due	–	78	206	7	–	291	–	–
– More than 30 days past due	–	10	337	13	–	360	–	–
Stage 3, credit-impaired financial assets	77	5,508	1,484	12	224	7,228	3	672
Gross balance¹	45,001	134,296	127,274	1,081	29,494	292,145	182,390	74,414
Stage 1	(8)	(101)	(314)	(15)	–	(430)	(52)	(10)
– Strong	(3)	(34)	(234)	(14)	–	(282)	(31)	(2)
– Satisfactory	(5)	(67)	(80)	(1)	–	(148)	(21)	(8)
Stage 2	(10)	(257)	(141)	(21)	(1)	(420)	(39)	(14)
– Strong	(1)	(18)	(65)	(14)	–	(97)	(5)	–
– Satisfactory	(2)	(179)	(22)	(3)	–	(204)	(23)	(7)
– Higher risk	(7)	(60)	(54)	(4)	(1)	(119)	(11)	(7)
Of which (stage 2):								
– Less than 30 days past due	–	(2)	(22)	(3)	–	(27)	–	–
– More than 30 days past due	–	(1)	(54)	(4)	–	(59)	–	–
Stage 3, credit-impaired financial assets	(6)	(3,533)	(760)	(12)	(15)	(4,320)	–	(112)
Total credit impairment	(24)	(3,891)	(1,215)	(48)	(16)	(5,170)	(91)	(136)
Net carrying value	44,977	130,405	126,059	1,033	29,478	286,975	–	–
Stage 1	0.0%	0.1%	0.3%	1.5%	0.0%	0.2%	0.0%	0.0%
– Strong	0.0%	0.0%	0.2%	1.4%	0.0%	0.1%	0.0%	0.0%
– Satisfactory	0.1%	0.2%	1.5%	6.7%	0.0%	0.4%	0.1%	0.0%
Stage 2	1.9%	3.3%	6.1%	38.9%	0.1%	3.7%	0.7%	0.5%
– Strong	1.8%	1.6%	3.7%	41.2%	0.0%	3.3%	0.5%	0.0%
– Satisfactory	0.9%	3.1%	10.7%	42.9%	0.0%	3.4%	0.6%	0.4%
– Higher risk	2.6%	6.5%	16.0%	30.8%	0.1%	5.3%	2.3%	2.7%
Of which (stage 2):								
– Less than 30 days past due	0.0%	2.6%	10.7%	42.9%	0.0%	9.3%	0.0%	0.0%
– More than 30 days past due	0.0%	10.0%	16.0%	30.8%	0.0%	16.4%	0.0%	0.0%
Stage 3, credit-impaired financial assets (S3)	7.8%	64.1%	51.2%	100.0%	6.7%	59.8%	0.0%	16.7%
– Stage 3 Collateral	2	621	554	–	–	1,175	–	34
– Stage 3 Cover ratio (after collateral)	10.4%	75.4%	88.5%	100.0%	6.7%	76.0%	0.0%	21.7%
Cover ratio	0.1%	2.9%	1.0%	4.4%	0.1%	1.8%	0.0%	0.2%
Fair value through profit or loss								
Performing	32,813	58,465	13	–	–	58,478	–	–
– Strong	28,402	38,014	13	–	–	38,027	–	–
– Satisfactory	4,411	20,388	–	–	–	20,388	–	–
– Higher risk	–	63	–	–	–	63	–	–
Defaulted (CG13-14)	–	33	–	–	–	33	–	–
Gross balance (FVTPL)²	32,813	58,498	13	–	–	58,511	–	–
Net carrying value (incl FVTPL)	77,790	188,903	126,072	1,033	29,478	345,486	–	–

1 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$13,996 million under Customers and of \$1,738 million under Banks, held at amortised cost

2 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$51,299 million under Customers and of \$30,548 million under Banks, held at fair value through profit or loss

Loans and advances by client segment credit quality analysis

			2024							
			Corporate & Investment Banking and Central & other items							
Credit grade	Regulatory 1 year PD range (%)	S&P external ratings equivalent	Gross				Credit impairment			
			Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million
Strong			112,265	1,229	-	113,494	(28)	(41)	-	(69)
1A-2B	0 – 0.045	A+ and above	32,160	31	-	32,191	(2)	-	-	(2)
3A-4A	0.046 – 0.110	A/A- to BBB+/BBB	40,712	524	-	41,236	(8)	(33)	-	(41)
4B-5B	0.111 – 0.425	BBB to BBB-/BB+	39,393	674	-	40,067	(18)	(8)	-	(26)
Satisfactory			38,439	6,665	-	45,104	(52)	(218)	-	(270)
6A-7B	0.426 – 1.350	BB+/BB to BB-	24,928	2,677	-	27,605	(21)	(24)	-	(45)
8A-9B	1.351 – 4.000	BB-/B+ to B	9,514	2,618	-	12,132	(20)	(169)	-	(189)
10A-11C	4.001 – 15.75	B/B- to B-/CCC+	3,997	1,370	-	5,367	(11)	(25)	-	(36)
Higher risk			-	784	-	784	-	(44)	-	(44)
12	15.751 – 99.999	CCC/C	-	784	-	784	-	(44)	-	(44)
Credit-impaired			-	-	4,574	4,574	-	-	(3,178)	(3,178)
13-14	100	Defaulted	-	-	4,574	4,574	-	-	(3,178)	(3,178)
Total			150,704	8,678	4,574	163,956	(80)	(303)	(3,178)	(3,561)

			2023							
Strong			112,215	1,145	-	113,360	(34)	(18)	-	(52)
1A-2B	0 – 0.045	A+ and above	37,936	81	-	38,017	-	-	-	-
3A-4A	0.046 – 0.110	A/A- to BBB+/BBB	32,004	558	-	32,562	(3)	-	-	(3)
4B-5B	0.111 – 0.425	BBB to BBB-/BB+	42,275	506	-	42,781	(31)	(18)	-	(49)
Satisfactory			36,976	5,840	-	42,816	(67)	(179)	-	(246)
6A-7B	0.426 – 1.350	BB+/BB to BB-	24,598	1,873	-	26,471	(38)	(77)	-	(115)
8A-9B	1.351 – 4.000	BB-/B+ to B	8,232	2,273	-	10,505	(13)	(90)	-	(103)
10A-11C	4.001 – 15.75	B/B- to B-/CCC+	4,146	1,694	-	5,840	(16)	(12)	-	(28)
Higher risk			-	1,882	-	1,882	-	(61)	-	(61)
12	15.751 – 99.999	CCC/C	-	1,882	-	1,882	-	(61)	-	(61)
Credit-impaired			-	-	5,732	5,732	-	-	(3,548)	(3,548)
13-14	100	Defaulted	-	-	5,732	5,732	-	-	(3,548)	(3,548)
Total			149,191	8,867	5,732	163,790	(101)	(258)	(3,548)	(3,907)

Undrawn commitment and financial guarantees – by client segment credit quality

			2024							
			Corporate & Investment Banking and Central & other items							
Credit grade	Regulatory 1 year PD range (%)	S&P external ratings equivalent	Notional				Credit impairment			
			Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million
Strong			140,733	1,265	–	141,998	(22)	(6)	–	(29)
1A-2B	0 – 0.045	A+ and above	29,623	280	–	29,903	(1)	–	–	(1)
3A-4A	0.046 – 0.110	A/A– to BBB+/BBB	53,568	492	–	54,060	(4)	–	–	(4)
4B-5B	0.111 – 0.425	BBB to BBB-/BB+	57,542	493	–	58,035	(17)	(6)	–	(23)
Satisfactory			46,394	4,200	–	50,594	(23)	(33)	–	(56)
6A-7B	0.426 – 1.350	BB+/BB to BB-	2,544	1,065	–	3,609	(4)	(6)	–	(10)
8A-9B	1.351 – 4.000	BB-/B+ to B	30,438	1,162	–	31,600	(11)	(16)	–	(27)
10A-11C	4.001 – 15.75	B/B– to B-/CCC+	13,412	1,973	–	15,385	(8)	(11)	–	(19)
Higher risk			–	286	–	286	–	(11)	–	(11)
12	15.751 – 99.999	CCC+/C	–	286	–	286	–	(11)	–	(11)
Credit-impaired			–	–	593	593	–	–	(129)	(129)
13-14	100	Defaulted	–	–	593	593	–	–	(129)	(129)
Total			187,127	5,751	593	193,471	(45)	(50)	(129)	(224)

			2023							
Strong			129,331	1,649	–	130,980	(19)	(3)	–	(22)
1A-2B	0 – 0.045	A+ and above	27,882	179	–	28,061	(1)	–	–	(1)
3A-4A	0.046 – 0.110	A/A– to BBB+/BBB	52,061	557	–	52,618	(3)	(1)	–	(4)
4B-5B	0.111 – 0.425	BBB to BBB-/BB+	49,388	913	–	50,301	(15)	(2)	–	(17)
Satisfactory			35,405	5,921	–	41,326	(23)	(28)	–	(51)
6A-7B	0.426 – 1.350	BB+/BB to BB-	2,581	1,065	–	3,646	(2)	(6)	–	(8)
8A-9B	1.351 – 4.000	BB-/B+ to B	25,089	3,028	–	28,117	(14)	(9)	–	(23)
10A-11C	4.001 – 15.75	B/B– to B-/CCC+	7,735	1,828	–	9,563	(7)	(13)	–	(20)
Higher risk			–	697	–	697	–	(15)	–	(15)
12	15.751 – 99.999	CCC+/C	–	697	–	697	–	(15)	–	(15)
Credit-impaired			–	–	663	663	–	–	(112)	(112)
13-14	100	Defaulted	–	–	663	663	–	–	(112)	(112)
Total			164,736	8,267	663	173,666	(42)	(46)	(112)	(200)

Loans and advances by client segment credit quality analysis by key geography

Corporate & Investment Banking and Central & other items																			
2024																			
	Gross								Credit Impairment										
	Stage 1			Stage 2			Stage 3		Stage 1			Stage 2			Stage 3			Total	
	Strong \$million	Satis- factory \$million	Total \$million	Strong \$million	Satis- factory \$million	Higher Risk \$million	Total \$million	Defaulted \$million	Total \$million	Strong \$million	Satis- factory \$million	Total \$million	Strong \$million	Satis- factory \$million	Higher Risk \$million	Total \$million	Defaulted \$million	Total \$million	Coverage %
Hong Kong	32,552	12,079	44,631	230	1,539	64	1,833	1,272	1,272	(8)	(8)	(16)	(33)	(107)	(9)	(149)	(1,157)	(1,157)	(2.8)%
Corporate Lending	14,429	6,180	20,609	225	1,329	64	1,618	1,260	1,260	(5)	(4)	(9)	(33)	(102)	(9)	(144)	(1,157)	(1,157)	(5.6)%
Non Corporate Lending ¹																			
Banks	4,567	2,730	7,297	4	206	–	210	12	12	(1)	(3)	(4)	–	(5)	–	(5)	–	–	(0.1)%
Singapore	13,556	3,169	16,725	1	4	–	5	–	–	(2)	(1)	(3)	–	–	–	–	–	–	(0.0)%
Corporate Lending	31,129	7,769	38,898	500	955	35	1,490	407	407	–	(8)	(8)	(4)	(14)	–	(18)	(196)	(196)	(0.5)%
Non Corporate Lending ¹	7,333	4,003	11,336	469	594	35	1,098	335	335	–	(6)	(6)	(4)	(14)	–	(18)	(195)	(195)	(1.7)%
Banks	19,348	567	19,915	29	358	–	387	–	–	–	(1)	(1)	–	–	–	–	–	–	(0.0)%
UK	4,448	3,199	7,647	2	3	–	5	72	72	–	(1)	(1)	–	–	–	–	(1)	(1)	(0.0)%
Corporate Lending	11,029	3,939	14,968	48	479	3	530	316	316	(10)	(4)	(14)	–	(27)	(6)	(33)	(258)	(258)	(1.9)%
Non Corporate Lending ¹	325	871	1,196	47	479	1	527	258	258	(9)	(3)	(12)	–	(27)	(6)	(33)	(237)	(237)	(14.2)%
Banks	8,690	982	9,672	1	–	–	1	57	57	(1)	(1)	(2)	–	–	–	–	(21)	(21)	(0.2)%
US	2,014	2,086	4,100	–	–	2	2	1	1	–	–	–	–	–	–	–	–	–	(0.0)%
Corporate Lending	16,244	4,456	20,700	92	433	33	558	31	31	(4)	(1)	(5)	(1)	(1)	–	(2)	(3)	(3)	(0.0)%
Non Corporate Lending ¹	5,426	2,761	8,187	77	322	–	399	28	28	(3)	(1)	(4)	(1)	(1)	–	(2)	–	–	(0.1)%
Banks	9,688	123	9,811	15	79	–	94	3	3	(1)	–	(1)	–	–	–	–	(3)	(3)	(0.0)%
China	1,130	1,572	2,702	–	32	33	65	–	–	–	–	–	–	–	–	–	–	–	(0.0)%
Corporate Lending	10,380	2,794	13,174	49	133	14	196	171	171	(3)	(1)	(4)	–	–	–	–	(86)	(86)	(0.7)%
Non Corporate Lending ¹	4,933	2,193	7,126	49	133	14	196	168	168	(1)	(1)	(2)	–	–	–	–	(83)	(83)	(1.1)%
Banks	3,241	363	3,604	–	–	–	–	–	–	(1)	–	(1)	–	–	–	–	–	–	(0.0)%
Others	2,206	238	2,444	–	–	–	–	3	3	(1)	–	(1)	–	–	–	–	(3)	(3)	(0.2)%
Corporate Lending	42,171	19,370	61,541	318	3,251	819	4,389	2,460	2,460	(10)	(33)	(43)	(3)	(70)	(29)	(102)	(1,483)	(1,483)	(2.4)%
Non Corporate Lending ¹	24,835	14,075	38,910	291	2,048	516	2,855	2,221	2,221	(6)	(26)	(32)	(3)	(38)	(28)	(69)	(1,333)	(1,333)	(3.3)%
Banks	9,451	3,590	13,041	22	1,117	153	1,292	232	232	–	(6)	(6)	–	(31)	(1)	(32)	(149)	(149)	(1.3)%
Total	7,885	1,705	9,590	5	86	150	241	7	7	(4)	(1)	(5)	–	(1)	–	(1)	(1)	(1)	(0.1)%
Total	143,505	50,407	193,912	1,237	6,790	968	8,996	4,657	4,657	(35)	(55)	(90)	(41)	(219)	(44)	(304)	(3,183)	(3,183)	(1.7)%

Corporate & Investment Banking and Central & other items ²																			
2023																			
	Gross								Credit Impairment										
	Stage 1			Stage 2			Stage 3		Stage 1			Stage 2			Stage 3			Total	
	Strong \$million	Satis- factory \$million	Total \$million	Strong \$million	Satis- factory \$million	Higher Risk \$million	Total \$million	Defaulted \$million	Total \$million	Strong \$million	Satis- factory \$million	Total \$million	Strong \$million	Satis- factory \$million	Higher Risk \$million	Total \$million	Defaulted \$million	Total \$million	Coverage %
Hong Kong	36,776	10,151	46,927	167	937	30	1,134	1,284	1,284	(7)	(23)	(30)	(4)	(118)	(3)	(125)	(1,025)	(1,025)	(2.4)%
Corporate Lending	14,401	6,289	20,690	165	855	30	1,050	1,219	1,219	(5)	(20)	(25)	(3)	(118)	(3)	(124)	(1,024)	(1,024)	(5.1)%
Non Corporate Lending ¹	6,323	2,458	8,781	1	81	–	82	65	65	(1)	(2)	(3)	–	–	–	–	(1)	(1)	(0.0)%
Banks	16,052	1,404	17,456	1	1	–	2	–	–	(1)	(1)	(2)	(1)	–	–	(1)	–	–	(0.0)%
Singapore	34,526	6,046	40,572	361	509	36	906	285	285	(4)	(4)	(8)	(11)	(14)	(4)	(29)	(75)	(75)	(0.3)%
Corporate Lending	5,766	2,334	8,100	304	504	36	844	221	221	(4)	(3)	(7)	(11)	(13)	(4)	(28)	(74)	(74)	(1.2)%
Non Corporate Lending ¹	23,033	510	23,543	57	2	–	59	–	–	–	(1)	(1)	–	–	–	–	–	–	(0.0)%
Banks	5,727	3,202	8,929	–	3	–	3	64	64	–	–	–	–	(1)	–	(1)	(1)	(1)	(0.0)%
UK	8,364	4,171	12,535	56	785	83	924	257	257	(5)	(5)	(10)	–	(14)	(7)	(21)	(209)	(209)	(1.7)%
Corporate Lending	5,407	1,559	6,966	52	539	71	662	250	250	(4)	(5)	(9)	–	(13)	(7)	(20)	(202)	(202)	(2.9)%
Non Corporate Lending ¹	558	1,244	1,802	–	160	–	160	3	3	(1)	–	(1)	–	(1)	–	(1)	(3)	(3)	(0.3)%
Banks	2,399	1,368	3,767	4	86	12	102	4	4	–	–	–	–	–	–	–	(4)	(4)	(0.1)%
US	14,550	4,742	19,292	219	176	19	414	5	5	(2)	(2)	(4)	–	–	–	–	(5)	(5)	(0.0)%
Corporate Lending	7,487	2,765	10,252	146	130	–	276	1	1	(1)	(2)	(3)	–	–	–	–	(1)	(1)	(0.0)%
Non Corporate Lending ¹	6,181	425	6,606	25	4	–	29	4	4	(1)	–	(1)	–	–	–	–	(4)	(4)	(0.1)%
Banks	882	1,552	2,434	48	42	19	109	–	–	–	–	–	–	–	–	–	–	–	(0.0)%
China	9,737	2,733	12,470	31	298	8	337	262	262	(3)	(4)	(7)	–	–	–	–	(125)	(125)	(1.0)%
Corporate Lending	4,723	2,179	6,902	31	297	8	336	259	259	(2)	(1)	(3)	–	–	–	–	(125)	(125)	(1.7)%
Non Corporate Lending ¹	3,254	318	3,572	–	–	–	–	–	–	(1)	–	(1)	–	–	–	–	–	–	(0.0)%
Banks	1,760	236	1,996	–	1	–	1	3	3	–	(3)	(3)	–	–	–	–	–	–	(0.2)%
Others	43,547	18,233	61,780	366	3,347	1,979	5,692	3,716	3,716	(16)	(34)	(50)	(4)	(35)	(54)	(93)	(2,115)	(2,115)	(3.2)%
Corporate Lending	16,189	15,034	31,223	345	2,322	678	3,345	3,335	3,335	(8)	(27)	(35)	(3)	(28)	(46)	(77)	(2,012)	(2,012)	(5.6)%
Non Corporate Lending ¹	18,894	1,861	20,755	19	946	1,059	2,024	375	375	(6)	(6)	(12)	(1)	(6)	(1)	(8)	(102)	(102)	(0.5)%
Banks	8,464	1,338	9,802	2	79	242	323	6	6	(2)	(1)	(3)	–	(1)	(7)	(8)	(1)	(1)	(0.1)%
Total	147,500	46,076	193,576	1,200	6,052	2,155	9,407	5,809	5,809	(37)	(72)	(109)	(19)	(181)	(68)	(268)	(3,554)	(3,554)	(1.9)%

1 Include financing, insurance and non-banking corporations and governments

2 Amounts have been re-presented from a regional basis (Asia; Africa & Middle East; and Europe & Americas) to key geographies covering the majority of the reported balances

Wealth & Retail Banking and Ventures																			
2024																			
	Gross								Credit Impairment										
	Stage 1		Stage 2			Stage 3			Stage 1		Stage 2			Stage 3			Total		Coverage %
	Strong \$million	Satisfactory \$million	Strong \$million	Satisfactory \$million	Higher Risk \$million	Strong \$million	Impaired \$million	Total \$million	Strong \$million	Satisfactory \$million	Strong \$million	Satisfactory \$million	Higher Risk \$million	Strong \$million	Impaired \$million	Total \$million	Strong \$million	Total \$million	
Hong Kong	41,906	320	42,226	288	47	40	375	228	(59)	(14)	(73)	(33)	(20)	(4)	(57)	(69)	(69)	(69)	(0.5)%
Mortgages	31,080	265	31,345	55	14	24	93	75	–	–	–	–	–	–	–	(7)	(7)	(7)	(0.0)%
Credit cards	4,210	19	4,229	93	30	1	124	14	(36)	(11)	(47)	(27)	(19)	(1)	(47)	(14)	(14)	(14)	(2.5)%
Others	6,616	36	6,652	140	3	15	158	139	(23)	(3)	(26)	(6)	(1)	(3)	(10)	(48)	(48)	(48)	(1.2)%
Singapore	26,755	52	26,807	441	39	34	514	312	(29)	(26)	(55)	(6)	(6)	(6)	(18)	(265)	(265)	(265)	(1.2)%
Mortgages	13,531	12	13,543	160	32	15	207	9	–	–	–	–	–	–	–	(4)	(4)	(4)	(0.0)%
Credit cards	2,248	25	2,273	14	5	16	35	16	(9)	(26)	(35)	(5)	(5)	(4)	(14)	(19)	(19)	(19)	(2.9)%
Others	10,976	15	10,991	267	2	3	272	287	(20)	–	(20)	(1)	(1)	(2)	(4)	(242)	(242)	(242)	(2.3)%
Korea	18,062	220	18,282	378	9	22	409	112	(22)	(1)	(23)	(28)	(4)	(1)	(33)	(33)	(33)	(33)	(0.5)%
Mortgages	13,198	171	13,369	250	8	17	275	62	–	–	–	–	–	–	–	(2)	(2)	(2)	(0.0)%
Credit cards	36	1	37	1	–	–	1	–	(1)	–	(1)	–	–	–	–	–	–	–	(2.6)%
Others	4,828	48	4,876	127	1	5	133	50	(21)	(1)	(22)	(28)	(4)	(1)	(33)	(31)	(31)	(31)	(1.7)%
Rest of World	26,085	4,998	31,083	338	76	241	655	977	(239)	(13)	(252)	(39)	(5)	(18)	(62)	(403)	(403)	(403)	(2.2)%
Mortgages	15,079	2,007	17,086	136	43	141	320	459	(4)	(2)	(6)	–	–	(1)	(1)	(124)	(124)	(124)	(0.7)%
Credit cards	1,148	351	1,499	29	12	19	60	40	(33)	(1)	(34)	(21)	–	(1)	(22)	(27)	(27)	(27)	(5.2)%
Others	9,858	2,640	12,498	173	21	81	275	478	(202)	(10)	(212)	(18)	(5)	(16)	(39)	(252)	(252)	(252)	(3.8)%
Total	112,808	5,590	118,398	1,445	171	337	1,953	1,629	(349)	(54)	(403)	(106)	(35)	(29)	(170)	(770)	(770)	(770)	(1.1)%

Wealth & Retail Banking and Ventures ¹																			
2023																			
	Gross								Credit Impairment										
	Stage 1		Stage 2			Stage 3			Stage 1		Stage 2			Stage 3			Total		Coverage %
	Strong \$million	Satisfactory \$million	Strong \$million	Satisfactory \$million	Higher Risk \$million	Strong \$million	Impaired \$million	Total \$million	Strong \$million	Satisfactory \$million	Strong \$million	Satisfactory \$million	Higher Risk \$million	Strong \$million	Impaired \$million	Total \$million	Strong \$million	Total \$million	
Hong Kong	42,930	242	43,172	514	74	51	639	174	(24)	(34)	(58)	(28)	(13)	(12)	(53)	(49)	(49)	(49)	(0.4)%
Mortgages	32,376	152	32,528	282	53	13	348	63	–	–	–	(1)	–	–	(1)	(1)	(1)	(1)	(0.0)%
Credit cards	4,045	44	4,089	80	17	24	121	18	(9)	(33)	(42)	(19)	(12)	(8)	(39)	(18)	(18)	(18)	(2.3)%
Others	6,509	46	6,555	152	4	14	170	93	(15)	(1)	(16)	(8)	(1)	(4)	(13)	(30)	(30)	(30)	(0.9)%
Singapore	26,644	68	26,712	379	41	34	454	282	(15)	(18)	(33)	(2)	(5)	(4)	(11)	(247)	(247)	(247)	(1.1)%
Mortgages	14,993	16	15,009	230	34	11	275	13	–	–	–	–	–	–	–	(4)	(4)	(4)	(0.0)%
Credit cards	1,916	25	1,941	11	5	16	32	10	(7)	(17)	(24)	–	(5)	(3)	(8)	(16)	(16)	(16)	(2.4)%
Others	9,735	27	9,762	138	2	7	147	259	(8)	(1)	(9)	(2)	–	(1)	(3)	(227)	(227)	(227)	(2.4)%
Korea	22,966	211	23,177	462	20	9	491	93	(40)	–	(40)	(18)	–	–	(18)	(19)	(19)	(19)	(0.3)%
Mortgages	16,535	164	16,699	364	18	8	390	69	–	–	–	–	–	–	–	–	–	–	(0.0)%
Credit cards	113	2	115	3	–	–	3	–	(4)	–	(4)	–	–	–	–	–	–	–	(3.4)%
Others	6,318	45	6,363	95	2	1	98	24	(36)	–	(36)	(18)	–	–	(18)	(19)	(19)	(19)	(1.1)%
Rest of World	26,653	4,787	31,440	440	79	256	775	947	(169)	(29)	(198)	(31)	(7)	(42)	(80)	(457)	(457)	(457)	(2.2)%
Mortgages	14,678	2,297	16,975	156	48	134	338	375	(5)	(2)	(7)	(2)	–	(1)	(3)	(118)	(118)	(118)	(0.7)%
Credit cards	1,419	68	1,487	73	1	15	89	40	(26)	(9)	(35)	(7)	–	(10)	(17)	(16)	(16)	(16)	(4.2)%
Others	10,556	2,422	12,978	211	29	107	347	532	(138)	(18)	(156)	(22)	(7)	(31)	(60)	(323)	(323)	(323)	(3.9)%
Total	119,193	5,308	124,501	1,795	213	350	2,358	1,496	(248)	(81)	(329)	(79)	(25)	(58)	(162)	(772)	(772)	(772)	(1.0)%

1 Amounts have been re-presented from a regional basis (Asia, Africa and Middle East, and Europe and Americas) to key geographies covering the majority of the reported balances.

Undrawn commitment and financial guarantees – by client segment credit quality

Wealth & Retail Banking and Ventures									
2024									
	Notional				ECL				Total \$million
	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	
Amortised cost									
Strong	70,595	100	–	70,695	(15)	(3)	–	(18)	
Satisfactory	850	11	–	861	(5)	(1)	–	(6)	
Higher risk	–	21	–	21	–	(3)	–	(3)	
Impaired	–	–	8	8	–	–	–	–	
Total	71,445	132	8	71,585	(20)	(7)	–	(27)	

2023									
	Notional				ECL				Total \$million
	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	
Amortised cost									
Strong	73,819	160	–	73,980	(15)	(3)	–	(18)	
Satisfactory	889	18	–	907	(5)	(1)	–	(6)	
Higher risk	–	33	–	33	–	(3)	–	(3)	
Impaired	–	–	3	3	–	–	–	–	
Total	74,708	211	3	74,922	(20)	(7)	–	(27)	

Movement in gross exposures and credit impairment for loans and advances, debt securities, undrawn commitments and financial guarantees (audited)

The tables overleaf set out the movement in gross exposures and credit impairment by stage in respect of amortised cost loans to banks and customers, undrawn commitments, financial guarantees and debt securities classified at amortised cost and FVOCI. The tables are presented for the Group and separately for CIB and WRB (which also includes a separate presentation for secured and unsecured exposures).

Methodology

The movement lines within the tables are an aggregation of monthly movements over the year and will therefore reflect the accumulation of multiple trades during the year. The credit impairment charge in the income statement comprises the amounts within the boxes in the table below, less recoveries of amounts previously written off. Discount unwind is reported in net interest income and related to stage 3 financial instruments only.

The approach for determining the key line items in the tables is set out below.

- **Transfers** – transfers between stages are deemed to occur at the beginning of a month based on prior month closing balances.
- **Net remeasurement from stage changes** – the remeasurement of credit impairment provisions arising from a change in stage is reported within the stage that the assets are transferred to. For example, assets transferred into stage 2 are remeasured from a 12-month to a lifetime ECL, with the effect of remeasurement reported in stage 2. For stage 3, this represents the initial remeasurement from specific provisions recognised on individual assets transferred into stage 3 in the year.
- **Net changes in exposures** – new business written less repayments in the year. Within stage 1, new business written will attract up to 12 months of ECL charges. Repayments of non-amortising loans (primarily within CIB) will have low amounts of ECL provisions attributed to them, due to the release of provisions over the term to maturity. In stages 2 and 3, the net change in exposures reflect repayments although stage 2 may include new facilities where clients are on non-purely precautionary early alert, are CG 12, or when non-investment grade debt securities are acquired.
- **Changes in risk parameters** – for stages 1 and 2, this reflects changes in the probability of default (PD), loss given default (LGD) and exposure at default (EAD) of assets during the year, which includes the impact of releasing provisions over the term to maturity. It also includes the effect of changes in forecasts of macroeconomic variables during the year. In stage 3, this line represents additional specific provisions recognised on exposures held within stage 3.
- **Interest due but not paid** – change in contractual amount of interest due in stage 3 financial instruments but not paid, being the net of accruals, repayments and write-offs, together with the corresponding change in credit impairment.

Changes to ECL models, which incorporate changes to model approaches and methodologies, are not reported as a separate line item as these have an impact over a number of lines and stages.

Movements during the year

Stage 1 gross exposures decreased by \$3.2 billion to \$721 billion (31 December 2023: \$724 billion). CIB exposure increased by \$30 billion to \$367 billion (31 December 2023: \$337 billion), due to an increase in exposures in financial guarantees in the Energy, Financing, Insurance and Transport sectors. WRB decreased by \$11.4 billion to \$180 billion (31 December 2023: \$191 billion), largely driven by fewer mortgages in Korea, Singapore and Hong Kong, as well as off-balance sheet commitments. Debt securities decreased by \$16.5 billion, largely in the Central and other items segment which had also seen a \$6.3 billion reduction in loan balances.

Total stage 1 provisions increased by \$56 million to \$582 million (31 December 2023: \$526 million). CIB provisions decreased by \$18 million to \$133 million (31 December 2023: \$151 million), due to a release in the China CRE overlay which was driven by repayments and portfolio movements. This was partly offset by new overlays of \$27 million, primarily in Bangladesh. WRB provisions increased by \$67 million to \$392 million (31 December 2023: \$325 million), due to delinquencies in the personal loans and unsecured lending portfolio.

Stage 2 gross exposures decreased by \$4 billion to \$19 billion (31 December 2023: \$22 billion), primarily driven by a net reduction in CIB exposures from off-balance sheet instruments. WRB exposures decreased by \$0.4 billion to \$2 billion (31 December 2023: \$2.5 billion), mainly due to the mortgage portfolio.

Stage 2 provisions increased by \$20 million to \$537 million (31 December 2023: \$517 million). CIB provisions increased by \$44 million to \$362 million (31 December 2023: \$318 million), due to \$76 million new overlays, largely in Hong Kong, and portfolio movements. This was offset by China CRE overlay releases, which were driven by repayments. WRB provisions increased by \$11 million to \$151 million (31 December 2023: \$140 million) mainly driven by the overlay in Korea due to the settlement failure of two e-commerce platforms. Debt securities primarily held in the Central and other items segment decreased by \$31 million, due to sovereign upgrades.

The impact of model and methodology updates in 2024 reduced modelled provisions by \$15 million across stages 1, 2 and 3 in WRB.

Stage 3 gross exposures for CIB decreased by \$1.1 billion to \$5.2 billion (31 December 2023: \$6.3 billion) due to repayments and write-offs. CIB provisions decreased by \$0.3 billion to \$3.3 billion (31 December 2023: \$3.7 billion), due to releases from repayments and write-offs. WRB stage 3 loans remained broadly stable at \$1.6 billion (31 December 2023: \$1.5 billion) and provisions also remained stable at \$0.8 billion (31 December 2023: \$0.8 billion). The amount of stage 3 exposures written off during the year that remain subject to enforcement activity is \$1.2 billion (31 December 2023: \$1 billion).

All segments (audited)

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3 ⁵			Total		
	Gross balance ³ \$million	Total credit impairment \$million	Net \$million	Gross balance ³ \$million	Total credit impairment \$million	Net \$million	Gross balance ³ \$million	Total credit impairment \$million	Net \$million	Gross balance ³ \$million	Total credit impairment \$million	Net \$million
As at 1 January 2023	720,112	(645)	719,467	27,479	(618)	26,861	8,841	(4,724)	4,117	756,432	(5,987)	750,445
Transfers to stage 1	19,594	(661)	18,933	(19,583)	661	(18,922)	(11)	–	(11)	–	–	–
Transfers to stage 2	(42,628)	174	(42,454)	42,793	(182)	42,611	(165)	8	(157)	–	–	–
Transfers to stage 3	(96)	6	(90)	(2,329)	326	(2,003)	2,425	(332)	2,093	–	–	–
Net change in exposures	23,717	(185)	23,532	(22,727)	22	(22,705)	(1,708)	624	(1,084)	(718)	461	(257)
Net remeasurement from stage changes	–	52	52	–	(199)	(199)	–	(163)	(163)	–	(310)	(310)
Changes in risk parameters	–	202	202	–	(32)	(32)	–	(1,100)	(1,100)	–	(930)	(930)
Write-offs	–	–	–	–	–	–	(1,027)	1,027	–	(1,027)	1,027	–
Interest due but unpaid	–	–	–	–	–	–	(83)	83	–	(83)	83	–
Discount unwind	–	–	–	–	–	–	–	180	180	–	180	180
Exchange translation differences and other movements ¹	3,177	531	3,708	(3,365)	(495)	(3,860)	(128)	(102)	(230)	(316)	(66)	(382)
As at 31 December 2023²	723,876	(526)	723,350	22,268	(517)	21,751	8,144	(4,499)	3,645	754,288	(5,542)	748,746
Income statement ECL (charge)/release		69			(209)			(639)			(779)	
Recoveries of amounts previously written off		–			–			271			271	
Total credit impairment (charge)/release		69			(209)			(368)			(508)	
As at 1 January 2024	723,876	(526)	723,350	22,268	(517)	21,751	8,144	(4,499)	3,645	754,288	(5,542)	748,746
Transfers to stage 1	16,433	(543)	15,890	(16,423)	543	(15,880)	(10)	–	(10)	–	–	–
Transfers to stage 2	(33,301)	128	(33,173)	33,770	(153)	33,617	(469)	25	(444)	–	–	–
Transfers to stage 3	(1,631)	63	(1,568)	(146)	168	22	1,777	(231)	1,546	–	–	–
Net change in exposures	29,928	(173)	29,755	(18,435)	80	(18,355)	(1,383)	622	(761)	10,110	529	10,639
Net remeasurement from stage changes	–	61	61	–	(185)	(185)	–	(203)	(203)	–	(327)	(327)
Changes in risk parameters	–	84	84	–	(242)	(242)	–	(873)	(873)	–	(1,031)	(1,031)
Derecognised	–	–	–	–	–	–	–	–	–	–	–	–
Write-offs	–	–	–	–	–	–	(1,260)	1,260	–	(1,260)	1,260	–
Interest due but unpaid	–	–	–	–	–	–	53	(53)	–	53	(53)	–
Discount unwind	–	–	–	–	–	–	–	135	135	–	135	135
Exchange translation differences and other movements ¹	(14,626)	324	(14,302)	(2,427)	(231)	(2,658)	147	(268)	(121)	(16,906)	(175)	(17,081)
As at 31 December 2024²	720,679	(582)	720,097	18,607	(537)	18,070	6,999	(4,085)	2,914	746,285	(5,204)	741,081
Income statement ECL (charge)/release ⁶		(28)			(347)			(454)			(829)	
Recoveries of amounts previously written off		–			–			279			279	
Total credit impairment (charge)/release⁴		(28)			(347)			(175)			(550)	

1 Includes fair value adjustments and amortisation on debt securities

2 Excludes Cash and balances at central banks, Accrued income, Assets held for sale and Other assets gross balances of \$101,755 million (31 December 2023: \$111,478 million) and Total credit impairment of \$63 million (31 December 2023: \$59 million)

3 The gross balance includes the notional amount of off balance sheet instruments

4 Reported basis

5 Stage 3 gross includes \$59 million (31 December 2023: \$80 million) originated credit-impaired debt securities with impairment of \$Nil million (31 December 2023: \$14 million)

6 Does not include release relating to Other assets of \$3 million (31 December 2023: Nil)

Corporate & Investment Banking (audited)

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million
As at 1 January 2023	315,437	(194)	315,243	20,148	(411)	19,737	6,994	(3,822)	3,172	342,579	(4,427)	338,152
Transfers to stage 1	14,948	(347)	14,601	(14,948)	347	(14,601)	–	–	–	–	–	–
Transfers to stage 2	(34,133)	80	(34,053)	34,175	(88)	34,087	(42)	8	(34)	–	–	–
Transfers to stage 3	(17)	–	(17)	(1,270)	141	(1,129)	1,287	(141)	1,146	–	–	–
Net change in exposures	41,314	(73)	41,241	(20,084)	89	(19,995)	(1,335)	623	(712)	19,895	639	20,534
Net remeasurement from stage changes	–	15	15	–	(45)	(45)	–	(82)	(82)	–	(112)	(112)
Changes in risk parameters	–	60	60	–	(68)	(68)	–	(668)	(668)	–	(676)	(676)
Write-offs	–	–	–	–	–	–	(340)	340	–	(340)	340	–
Interest due but unpaid	–	–	–	–	–	–	(120)	120	–	(120)	120	–
Discount unwind	–	–	–	–	–	–	–	155	155	–	155	155
Exchange translation differences and other movements	(360)	308	(52)	(1,148)	(283)	(1,431)	(188)	(184)	(372)	(1,696)	(159)	(1,855)
As at 31 December 2023	337,189	(151)	337,038	16,873	(318)	16,555	6,256	(3,651)	2,605	360,318	(4,120)	356,198
Income statement ECL (charge)/release		2			(24)			(127)			(149)	
Recoveries of amounts previously written off		–			–			31			31	
Total credit impairment (charge)/release		2			(24)			(96)			(118)	
As at 1 January 2024	337,189	(151)	337,038	16,873	(318)	16,555	6,256	(3,651)	2,605	360,318	(4,120)	356,198
Transfers to stage 1	10,390	(245)	10,145	(10,390)	245	(10,145)	–	–	–	–	–	–
Transfers to stage 2	(25,698)	47	(25,651)	25,810	(58)	25,752	(112)	11	(101)	–	–	–
Transfers to stage 3	(186)	(4)	(190)	(186)	22	(164)	372	(18)	354	–	–	–
Net change in exposures	50,866	(50)	50,816	(16,508)	88	(16,420)	(1,063)	607	(456)	33,295	645	33,940
Net remeasurement from stage changes	–	16	16	(4)	(36)	(40)	–	(100)	(100)	(4)	(120)	(124)
Changes in risk parameters	–	29	29	–	(129)	(129)	–	(336)	(336)	–	(436)	(436)
Derecognised	–	–	–	–	–	–	–	–	–	–	–	–
Write-offs	–	–	–	–	–	–	(321)	321	–	(321)	321	–
Interest due but unpaid	–	–	–	–	–	–	25	(25)	–	25	(25)	–
Discount unwind	–	–	–	–	–	–	–	104	104	–	104	104
Exchange translation differences and other movements	(5,455)	225	(5,230)	(726)	(176)	(902)	13	(225)	(212)	(6,168)	(176)	(6,344)
As at 31 December 2024	367,106	(133)	366,973	14,869	(362)	14,507	5,170	(3,312)	1,858	387,145	(3,807)	383,338
Income statement ECL (charge)/release		(5)			(77)			171			89	
Recoveries of amounts previously written off		–			–			26			26	
Total credit impairment (charge)/release		(5)			(77)			197			115	

1 The gross balance includes the notional amount of off balance sheet instruments

Wealth & Retail Banking (audited)

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million
As at 1 January 2023	193,239	(413)	192,826	1,821	(118)	1,703	1,454	(776)	678	196,514	(1,307)	195,207
Transfers to stage 1	4,265	(246)	4,019	(4,254)	246	(4,008)	(11)	–	(11)	–	–	–
Transfers to stage 2	(7,544)	73	(7,471)	7,667	(73)	7,594	(123)	–	(123)	–	–	–
Transfers to stage 3	(64)	1	(63)	(1,049)	187	(862)	1,113	(188)	925	–	–	–
Net change in exposures	1,965	(78)	1,887	(1,713)	14	(1,699)	(395)	–	(395)	(143)	(64)	(207)
Net remeasurement from stage changes	–	31	31	–	(137)	(137)	–	(38)	(38)	–	(144)	(144)
Changes in risk parameters	–	110	110	–	(69)	(69)	–	(426)	(426)	–	(385)	(385)
Write-offs	–	–	–	–	–	–	(649)	649	–	(649)	649	–
Interest due but unpaid	–	–	–	–	–	–	37	(37)	–	37	(37)	–
Discount unwind	–	–	–	–	–	–	–	24	24	–	24	24
Exchange translation differences and other movements	(862)	197	(665)	–	(190)	(190)	59	33	92	(803)	40	(763)
As at 31 December 2023	190,999	(325)	190,674	2,472	(140)	2,332	1,485	(759)	726	194,956	(1,224)	193,732
Income statement ECL (charge)/release		63			(192)			(464)			(593)	
Recoveries of amounts previously written off		–			–			239			239	
Total credit impairment (charge)/release		63			(192)			(225)			(354)	
As at 1 January 2024	190,999	(325)	190,674	2,472	(140)	2,332	1,485	(759)	726	194,956	(1,224)	193,732
Transfers to stage 1	5,126	(288)	4,838	(5,116)	288	(4,828)	(10)	–	(10)	–	–	–
Transfers to stage 2	(7,393)	80	(7,313)	7,525	(80)	7,445	(132)	–	(132)	–	–	–
Transfers to stage 3	(98)	1	(97)	(1,254)	211	(1,043)	1,352	(212)	1,140	–	–	–
Net change in exposures	(3,926)	(89)	(4,015)	(1,505)	21	(1,484)	(431)	–	(431)	(5,862)	(68)	(5,930)
Net remeasurement from stage changes	–	29	29	–	(144)	(144)	–	(44)	(44)	–	(159)	(159)
Changes in risk parameters	–	19	19	–	(152)	(152)	–	(537)	(537)	–	(670)	(670)
Write-offs	–	–	–	–	–	–	(808)	808	–	(808)	808	–
Interest due but unpaid	–	–	–	–	–	–	28	(28)	–	28	(28)	–
Discount unwind	–	–	–	–	–	–	–	30	30	–	30	30
Exchange translation differences and other movements	(5,128)	181	(4,947)	(92)	(155)	(247)	139	(16)	123	(5,081)	10	(5,071)
As at 31 December 2024	179,580	(392)	179,188	2,030	(151)	1,879	1,623	(758)	865	183,233	(1,301)	181,932
Income statement ECL (charge)/release		(41)			(275)			(581)			(897)	
Recoveries of amounts previously written off		–			–			253			253	
Total credit impairment (charge)/release		(41)			(275)			(328)			(644)	

1 The gross balance includes the notional amount of off-balance sheet instruments

Wealth & Retail Banking – Secured (audited)

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million
As at 1 January 2023	135,362	(60)	135,302	1,413	(17)	1,396	1,028	(552)	476	137,803	(629)	137,174
Transfers to stage 1	3,311	(20)	3,291	(3,302)	20	(3,282)	(9)	–	(9)	–	–	–
Transfers to stage 2	(5,340)	11	(5,329)	5,436	(9)	5,427	(96)	(2)	(98)	–	–	–
Transfers to stage 3	(28)	1	(27)	(463)	1	(462)	491	(2)	489	–	–	–
Net change in exposures	(3,138)	(16)	(3,154)	(1,250)	3	(1,247)	(216)	–	(216)	(4,604)	(13)	(4,617)
Net remeasurement from stage changes	–	4	4	–	(16)	(16)	–	(3)	(3)	–	(15)	(15)
Changes in risk parameters	–	22	22	–	24	24	–	(110)	(110)	–	(64)	(64)
Write-offs	–	–	–	–	–	–	(109)	109	–	(109)	109	–
Interest due but unpaid	–	–	–	–	–	–	(3)	3	–	(3)	3	–
Discount unwind	–	–	–	–	–	–	–	12	12	–	12	12
Exchange translation differences and other movements	(369)	25	(344)	(7)	(22)	(29)	(24)	20	(4)	(400)	23	(377)
As at 31 December 2023	129,798	(33)	129,765	1,827	(16)	1,811	1,062	(525)	537	132,687	(574)	132,113
Income statement ECL (charge)/release		10			11			(113)			(92)	
Recoveries of amounts previously written off		–			–			68			68	
Total credit impairment (charge)/release		10			11			(45)			(24)	
As at 1 January 2024	129,798	(33)	129,765	1,827	(16)	1,811	1,062	(525)	537	132,687	(574)	132,113
Transfers to stage 1	3,839	(23)	3,816	(3,836)	23	(3,813)	(3)	–	(3)	–	–	–
Transfers to stage 2	(4,952)	13	(4,939)	5,054	(13)	5,041	(102)	–	(102)	–	–	–
Transfers to stage 3	(43)	–	(43)	(566)	19	(547)	609	(19)	590	–	–	–
Net change in exposures	2,570	(11)	2,559	(917)	8	(909)	(268)	–	(268)	1,385	(3)	1,382
Net remeasurement from stage changes	–	6	6	–	(15)	(15)	–	(7)	(7)	–	(16)	(16)
Changes in risk parameters	–	(6)	(6)	–	(6)	(6)	–	(129)	(129)	–	(141)	(141)
Write-offs	–	–	–	–	–	–	(114)	114	–	(114)	114	–
Interest due but unpaid	–	–	–	–	–	–	53	(53)	–	53	(53)	–
Discount unwind	–	–	–	–	–	–	–	16	16	–	16	16
Exchange translation differences and other movements	(4,496)	6	(4,490)	(57)	(31)	(88)	(33)	47	14	(4,586)	22	(4,564)
As at 31 December 2024	126,716	(48)	126,668	1,505	(31)	1,474	1,204	(556)	648	129,425	(635)	128,790
Income statement ECL (charge)/release		(11)			(13)			(136)			(160)	
Recoveries of amounts previously written off		–			–			80			80	
Total credit impairment (charge)/release		(11)			(13)			(56)			(80)	

1 The gross balance includes the notional amount of off balance sheet instruments

Wealth & Retail Banking – Unsecured (audited)

Retail Banking Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net \$million
As at 1 January 2023	57,877	(353)	57,524	408	(101)	307	426	(224)	202	58,711	(678)	58,033
Transfers to stage 1	954	(226)	728	(952)	226	(726)	(2)	–	(2)	–	–	–
Transfers to stage 2	(2,204)	62	(2,142)	2,231	(64)	2,167	(27)	2	(25)	–	–	–
Transfers to stage 3	(36)	–	(36)	(586)	186	(400)	622	(186)	436	–	–	–
Net change in exposures	5,103	(62)	5,041	(463)	11	(452)	(179)	–	(179)	4,461	(51)	4,410
Net remeasurement from stage changes	–	27	27	–	(121)	(121)	–	(35)	(35)	–	(129)	(129)
Changes in risk parameters	–	88	88	–	(93)	(93)	–	(316)	(316)	–	(321)	(321)
Write-offs	–	–	–	–	–	–	(540)	540	–	(540)	540	–
Interest due but unpaid	–	–	–	–	–	–	40	(40)	–	40	(40)	–
Discount unwind	–	–	–	–	–	–	–	12	12	–	12	12
Exchange translation differences and other movements	(493)	172	(321)	7	(168)	(161)	83	13	96	(403)	17	(386)
As at 31 December 2023	61,201	(292)	60,909	645	(124)	521	423	(234)	189	62,269	(650)	61,619
Income statement ECL (charge)/release		53			(203)			(351)			(501)	
Recoveries of amounts previously written off		–			–			171			171	
Total credit impairment (charge)/release		53			(203)			(180)			(330)	
As at 1 January 2024	61,201	(292)	60,909	645	(124)	521	423	(234)	189	62,269	(650)	61,619
Transfers to stage 1	1,287	(265)	1,022	(1,280)	265	(1,015)	(7)	–	(7)	–	–	–
Transfers to stage 2	(2,441)	67	(2,374)	2,471	(67)	2,404	(30)	–	(30)	–	–	–
Transfers to stage 3	(55)	1	(54)	(688)	192	(496)	743	(193)	550	–	–	–
Net change in exposures	(6,496)	(78)	(6,574)	(588)	13	(575)	(163)	–	(163)	(7,247)	(65)	(7,312)
Net remeasurement from stage changes	–	23	23	–	(129)	(129)	–	(37)	(37)	–	(143)	(143)
Changes in risk parameters	–	25	25	–	(146)	(146)	–	(408)	(408)	–	(529)	(529)
Write-offs	–	–	–	–	–	–	(694)	694	–	(694)	694	–
Interest due but unpaid	–	–	–	–	–	–	(25)	25	–	(25)	25	–
Discount unwind	–	–	–	–	–	–	–	14	14	–	14	14
Exchange translation differences and other movements	(632)	175	(457)	(35)	(124)	(159)	172	(63)	109	(495)	(12)	(507)
As at 31 December 2024	52,864	(344)	52,520	525	(120)	405	419	(202)	217	53,808	(666)	53,142
Income statement ECL (charge)/release		(30)			(262)			(445)			(737)	
Recoveries of amounts previously written off		–			–			172			172	
Total credit impairment (charge)/release		(30)			(262)			(273)			(565)	

¹ The gross balance includes the notional amount of off balance sheet instruments

Analysis of stage 2 balances

The table below analyses total stage 2 gross on-and off-balance sheet exposures and associated expected credit provisions by the key SICR driver that caused the exposures to be classified as stage 2 as at 31 December 2024 and 31 December 2023 for each segment.

Where multiple drivers apply, the exposure is allocated based on the table order. For example, a loan may have breached the PD thresholds and could also be on non-purely precautionary early alert; in this instance, the exposure is reported under 'Increase in PD'.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

	2024														
	Corporate & Investment Banking			Wealth & Retail Banking			Ventures			Central & other items ¹			Total		
	Gross \$million	ECL \$million	Coverage %	Gross \$million	ECL \$million	Coverage %	Gross \$million	ECL \$million	Coverage %	Gross \$million	ECL \$million	Coverage %	Gross \$million	ECL \$million	Coverage %
Increase in PD	8,465	112	1.3%	1,366	104	7.6%	48	20	31.3%	154	–	0.0%	10,033	236	2.4%
Non-purely precautionary early alert	3,473	44	1.3%	30	–	0.0%	–	–	0.0%	–	–	0.0%	3,503	44	1.3%
Higher risk (CG12)	686	24	3.5%	18	–	0.0%	–	–	0.0%	1,488	1	0.4%	2,192	25	1.1%
Top up/Sell down (Private Banking)	–	–	0.0%	254	1	0.4%	–	–	0.0%	–	–	0.0%	254	1	0.4%
Others	2,245	25	1.1%	150	5	3.3%	–	–	0.0%	482	–	0.0%	2,877	30	1.0%
30 days past due	–	–	0.0%	212	19	9.0%	6	4	66.7%	–	–	0.0%	218	23	10.6%
Management overlay	–	157	0.0%	–	22	0.0%	–	3	0.0%	–	–	0.0%	–	182	0.0%
Total stage 2	14,869	362	2.4%	2,030	151	7.4%	54	27	40.7%	2,124	1	0.3%	19,077	541	2.8%
2023															
Increase in PD	8,262	75	0.9%	1,962	109	5.6%	96	23	24.0%	599	13	2.2%	10,919	220	2.0%
Non-purely precautionary early alert	5,136	26	0.5%	37	–	0.0%	–	–	0.0%	–	–	0.0%	5,173	26	0.5%
Higher risk (CG12)	1,008	56	5.6%	26	1	3.8%	–	–	0.0%	2,020	17	0.8%	3,054	74	2.4%
Top up/Sell down (Private Banking)	–	–	0.0%	148	2	1.4%	–	–	0.0%	–	–	0.0%	148	2	1.7%
Others	2,467	37	1.5%	151	16	10.6%	–	–	0.0%	489	–	0.0%	3,107	53	1.7%
30 days past due	–	–	0.0%	148	12	8.1%	2	–	0.0%	–	–	0.0%	150	12	7.7%
Management overlay	–	124	0.0%	–	–	0.0%	–	–	0.0%	–	17	0.0%	–	141	0.0%
Total stage 2	16,873	318	1.9%	2,472	140	5.7%	98	23	23.5%	3,108	47	1.5%	22,551	528	2.3%

1 Includes Gross and ECL for Cash and balances at central banks and Assets held for sale

Credit impairment charge (audited)

The table below analyses credit impairment charges or releases of the ongoing business portfolio and restructuring business portfolio for the year ended 31 December 2024.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

	2024			2023		
	Stage 1 & 2 \$million	Stage 3 \$million	Total \$million	Stage 1 & 2 \$million	Stage 3 \$million	Total \$million
Ongoing business portfolio						
Corporate & Investment Banking	81	(187)	(106)	11	112	123
Wealth & Retail Banking	317	327	644	129	225	354
Ventures	10	64	74	42	43	85
Central & other items	(37)	(18)	(55)	(44)	10	(34)
Credit impairment charge/(release)	371	186	557	138	390	528
Restructuring business portfolio						
Others	1	(11)	(10)	1	(21)	(20)
Credit impairment charge/(release)	1	(11)	(10)	1	(21)	(20)
Total credit impairment charge/(release)	372	175	547	139	369	508

Problem credit management and provisioning (audited)

Forborne and other modified loans by client segment

A forborne loan arises when a concession has been made to the contractual terms of a loan in response to a customer's financial difficulties.

Net forborne loans decreased by \$221 million to \$784 million (31 December 2023: \$1 billion), mainly due to repayments in CIB non-performing forborne loans. Net non-performing forborne loans decreased by \$235 million to \$732 million (31 December 2023: \$967 million), which was partly offset by a \$17 million increase in CIB performing forborne loans.

Amortised cost	2024			2023		
	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Total \$million	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Total \$million
Gross stage 1 and 2 forborne loans	17	36	53	–	40	40
Modification of terms and conditions ¹	17	36	53	–	40	40
Impairment provisions	–	(1)	(1)	–	(2)	(2)
Modification of terms and conditions ¹	–	(1)	(1)	–	(2)	(2)
Net stage 1 and 2 forborne loans	17	35	52	–	38	38
Collateral	–	27	27	–	31	31
Gross stage 3 forborne loans	2,065	258	2,323	2,340	274	2,614
Modification of terms and conditions ¹	1,824	258	2,082	2,113	274	2,387
Refinancing ²	241	–	241	227	–	227
Impairment provisions	(1,481)	(110)	(1,591)	(1,529)	(118)	(1,647)
Modification of terms and conditions ¹	(1,242)	(110)	(1,352)	(1,337)	(118)	(1,454)
Refinancing ²	(239)	–	(239)	(192)	–	(192)
Net stage 3 forborne loans	584	148	732	811	156	967
Collateral	172	55	227	341	49	390
Net carrying value of forborne loans	601	183	784	811	194	1,005

1 Modification of terms is any contractual change apart from refinancing, as a result of credit stress of the counterparty, i.e. interest reductions, loan covenant waivers

2 Refinancing is a new contract to a borrower in credit stress, such that they are refinanced and can pay other debt contracts that they were unable to honour

Forborne and other modified loans by key geography

Net forborne loans decreased by \$221 million to \$784 million (31 December 2023: \$1 billion), mainly due to non-performing forborne loans.

Amortised cost	2024								2023 ³							
	Hong Kong \$million	Korea \$million	China \$million	Singapore \$million	UK \$million	US \$million	Other \$million	Total \$million	Hong Kong \$million	Korea \$million	China \$million	Singapore \$million	UK \$million	US \$million	Other \$million	Total \$million
Performing forborne loans	2	8	–	3	–	–	39	52	–	6	–	3	–	–	29	38
Stage 3 forborne loans	118	18	77	25	78	1	415	732	104	22	114	37	46	1	643	967
Net forborne loans	120	26	77	28	78	1	454	784	104	28	114	40	46	1	672	1,005

3 Amounts have been re-presented from a regional basis (Asia, Africa and Middle East, and Europe and Americas) to key geographies covering the majority of the reported balances)

Credit Risk mitigation

Potential credit losses from any given account, customer or portfolio are mitigated using a range of tools such as collateral, netting arrangements, credit insurance and credit derivatives, taking into account expected volatility and guarantees.

The reliance that can be placed on these mitigants is carefully assessed in light of issues such as legal certainty and enforceability, market valuation correlation and counterparty risk of the guarantor.

Collateral (audited)

A secured loan is one where the borrower pledges an asset as collateral of which the Group is able to take possession in the event that the borrower defaults.

The collateral values in the table below (which covers loans and advances to banks and customers, excluding those held at fair value through profit or loss) are adjusted where appropriate in accordance with our risk mitigation policy and for the effect of over-collateralisation. The extent of over-collateralisation has been determined with reference to both the drawn and undrawn components of exposure as this best reflects the effect of collateral and other credit enhancements on the amounts arising from ECL. The value of collateral reflects management's best estimate and is backtested against our prior experience.

Collateral held on loans and advances

The table below details collateral held against exposures, separately disclosing stage 2 and stage 3 exposure and corresponding collateral.

	2024			2024			2024		
	Net amount outstanding			Collateral			Net exposure		
	Total \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million	Total ² \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million	Total \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million
Amortised cost									
Corporate & Investment Banking ¹	181,897	8,657	1,376	36,750	3,052	298	145,147	5,605	1,078
Wealth & Retail Banking	119,248	1,758	858	85,163	891	584	34,085	867	274
Ventures	1,389	25	1	–	–	–	1,389	25	1
Central & other items	22,091	35	98	80	35	–	22,011	–	98
Total	324,625	10,475	2,333	121,993	3,978	882	202,632	6,497	1,451
2023									
Corporate & Investment Banking ¹	175,382	8,175	2,046	36,458	2,972	623	138,924	5,203	1,423
Wealth & Retail Banking	126,059	2,163	724	86,827	1,136	554	39,232	1,027	170
Ventures	1,033	33	–	–	–	–	1,033	33	–
Central & other items	29,478	964	209	2,475	964	–	27,003	–	209
Total	331,952	11,335	2,979	125,760	5,072	1,177	206,192	6,263	1,802

1 Includes loans and advances to banks

2 Adjusted for over-collateralisation based on the drawn and undrawn components of exposures

Collateral – Corporate & Investment Banking (audited)

Our underwriting standards encourage taking specific charges on assets and we consistently seek high-quality, investment-grade collateral.

Collateral taken for longer-term and sub-investment grade corporate loans increased to 49 per cent (31 December 2023: 41 per cent).

The unadjusted market value of collateral across all asset types, in respect of CIB, without adjusting for over collateralisation, increased to \$383 billion (31 December 2023: \$290 billion) predominantly due to an increase in reverse repos.

88 per cent (31 December 2023: 83 per cent) of tangible collateral excluding reverse repurchase agreements and financial guarantees held comprises physical assets with the remainder held in cash. Overall collateral remained broadly stable at \$37 billion (31 December 2023: \$36 billion).

Non-tangible collateral, such as guarantees and standby letters of credit, is also held against corporate exposures, although the financial effect of this type of collateral is less significant in terms of recoveries. However, this is considered when determining the loss given default and other credit-related factors. Collateral is also held against off-balance sheet exposures, including undrawn commitments and trade-related instruments.

Corporate & Investment Banking

	2024 \$million	2023 \$million
Amortised cost		
Maximum exposure	181,897	175,382
Property	8,504	9,339
Plant, machinery and other stock	935	933
Cash	1,973	2,985
Reverse repos	12,568	13,826
AA- to AA+	938	1,036
A- to A+	8,324	10,606
BBB- to BBB+	1,437	855
Lower than BBB-	95	169
Unrated	1,774	1,160
Financial guarantees and insurance	7,075	5,057
Commodities	33	5
Ships and aircraft	5,662	4,313
Total value of collateral¹	36,750	36,458
Net exposure	145,147	138,924

1 Adjusted for over-collateralisation based on the drawn and undrawn components of exposures

Collateral – Wealth & Retail Banking (audited)

In WRB, fully secured products remain stable at 85 per cent of the total portfolio (31 December 2023: 85 per cent).

The following table presents an analysis of loans to individuals by product – split between fully secured, partially secured and unsecured.

	2024				2023			
	Fully secured ¹ \$million	Partially secured ¹ \$million	Unsecured \$million	Total ² \$million	Fully secured ¹ \$million	Partially secured ¹ \$million	Unsecured \$million	Total ² \$million
Amortised cost								
Maximum exposure	101,264	536	17,448	119,248	106,914	505	18,640	126,059
Loans to individuals								
Mortgages	76,696	–	–	76,696	82,943	–	–	82,943
CCPL	463	–	16,343	16,806	375	–	17,395	17,770
Auto	160	–	–	160	312	–	–	312
Secured wealth products	21,928	–	–	21,928	20,303	–	–	20,303
Other	2,017	536	1,105	3,658	2,981	505	1,245	4,731
Total collateral ²				85,163				86,827
Net exposure ³				34,085				39,232
Percentage of total loans	85%	0%	15%		85%	0%	15%	

1 Secured loans are fully secured if the fair value of the collateral is equal to or greater than the loan at the time of origination. All other secured loans are considered to be partly secure

2 Collateral values are adjusted where appropriate in accordance with our risk mitigation policy and for the effect of over-collateralisation

3 Amounts net of ECL

Mortgage loan-to-value ratios by geography (audited)

Loan-to-value (LTV) ratios measure the ratio of the current mortgage outstanding to the current fair value of the properties on which they are secured.

For the majority of mortgage loans, the value of property held as security significantly exceeds the principal outstanding of the loan. The average LTV of the overall mortgage portfolio increased to 48.9 per cent (31 December 2023: 47.1 per cent) driven by a decrease in property prices and regulatory relaxations in a few key markets, including Hong Kong and Korea. Hong Kong, which represents 34.3 per cent of WRB mortgage portfolio, has an average LTV of 58.6 per cent (31 December 2023: 55.7 per cent). The increase in Hong Kong residential mortgage LTV was due to a decrease in property prices. However, 29 per cent of the Hong Kong mortgage exposure is backed by credit insurance and, specifically, 95 per cent of mortgage exposure with LTV greater than 80 per cent is backed by credit insurance.

Our other key markets continued to have low portfolio average LTVs (Korea and Singapore at 42.1 per cent and 42.5 per cent respectively). Korea average LTV increased by 1.7 per cent (31 December 2023: 40.4 per cent) was mainly due to government relaxations whereby highly regulated areas have eased up to accommodate customers with higher LTV.

An analysis of LTV ratios by geography for the mortgage portfolio is presented in the table below.

	2024					2023 ¹				
	Hong Kong % Gross	Singapore % Gross	Korea % Gross	Other % Gross	Total % Gross	Hong Kong % Gross	Singapore % Gross	Korea % Gross	Other % Gross	Total % Gross
Amortised cost										
Less than 50 per cent	40.9	52.7	64.1	50.2	51.3	44.9	50.9	69.5	51.0	54.9
50 per cent to 59 per cent	17.6	21.8	13.2	15.4	16.5	19.5	24.7	11.0	16.7	17.1
60 per cent to 69 per cent	12.7	15.6	13.5	17.0	14.3	9.7	15.2	9.7	16.3	11.9
70 per cent to 79 per cent	5.5	9.6	8.3	12.7	8.5	4.3	8.7	8.9	11.6	7.9
80 per cent to 89 per cent	5.1	0.1	0.8	4.1	2.9	7.3	0.5	0.6	3.6	3.3
90 per cent to 99 per cent	8.2	0.0	0.1	0.5	3.0	7.4	–	0.1	0.4	2.5
100 per cent and greater	10.1	0.1	0.1	0.2	3.5	7.0	–	0.1	0.4	2.4
Average portfolio loan-to-value	58.6	42.5	42.1	48.0	48.9	55.7	43.4	40.4	47.8	47.1
Loans to individuals – mortgages (\$million)	31,506	13,756	13,703	17,731	76,696	32,935	15,292	17,157	17,559	82,943

¹ Amounts have been re-presented from a regional basis (Asia, Africa and Middle East, and Europe and Americas) to key geographies covering the majority of the reported balances.

Collateral and other credit enhancements possessed or called upon (audited)

The Group obtains assets by taking possession of collateral or calling upon other credit enhancements (such as guarantees). Repossessed properties are sold in an orderly fashion. Where the proceeds are in excess of the outstanding loan balance, the excess is returned to the borrower.

Certain equity securities acquired may be held by the Group for investment purposes and are classified as fair value through profit or loss, and the related loan written off. The carrying value of collateral possessed and held by the Group is \$23.7 million (31 December 2023: \$16.5 million).

	2024 \$million	2023 \$million
Property, plant and equipment	6.1	10.5
Guarantees	4.7	6.0
Other	12.9	–
Total	23.7	16.5

Other Credit Risk mitigation (audited)

Other forms of Credit Risk mitigation are set out below.

Credit default swaps

The Group has entered into credit default swaps for portfolio management purposes, referencing loan assets with a notional value of \$3.5 billion (31 December 2023: \$3.5 billion). These credit default swaps are accounted for as financial guarantees as per IFRS 9 as they will only reimburse the holder for an incurred loss on an underlying debt instrument. The Group continues to hold the underlying assets referenced in the credit default swaps and it continues to be exposed to related Credit Risk and Foreign Exchange Rate Risk on these assets.

Credit linked notes

The Group has issued credit linked notes for portfolio management purposes, referencing loan assets with a notional value of \$18.6 billion (31 December 2023: \$22.5 billion). The Group continues to hold the underlying assets for which the credit linked notes provide mitigation. The credit linked notes of \$2.0 billion (31 December 2023: \$2.1 billion) are recognised as a financial liability at amortised cost on the balance sheet and are adjusted, where appropriate, for reductions in expected future cash flows with a corresponding credit impairment in the income statement.

Derivative financial instruments

The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions. These are also set out under the 'Derivative financial instruments Credit Risk mitigation' section (page 249).

Off-balance sheet exposures

For certain types of exposures, such as letters of credit and guarantees, the Group obtains collateral such as cash depending on internal Credit Risk assessments, as well as in the case of letters of credit holding legal title to the underlying assets should a default take place.

Other portfolio analysis

This section provides maturity analysis by credit quality by industry and industry and retail products analysis by key geography.

Maturity analysis of loans and advances by client segment

Loans and advances to the CIB segment remain predominantly short-term, with \$91 billion (31 December 2023: \$91 billion) maturing in less than one year. 91 per cent (31 December 2023: 98 per cent) of loans to banks mature in less than one year, as net exposures decreased to \$44 billion (31 December 2023: \$45 billion). Shorter maturities give us the flexibility to respond promptly to events and rebalance or reduce our exposure to clients or sectors that are facing increased pressure or uncertainty.

The WRB short-term book of one year or less, is stable at 27 per cent (31 December 2023: 26 per cent). The WRB long-term book of over five years also remained stable at 62 per cent (31 December 2023: 63 per cent).

	2024				2023			
	One year or less \$million	One to five years \$million	Over five years \$million	Total \$million	One year or less \$million	One to five years \$million	Over five years \$million	Total \$million
Amortised cost								
Corporate & Investment Banking	91,065	33,130	17,670	141,865	90,728	30,746	12,822	134,296
Wealth & Retail Banking	32,252	13,194	75,091	120,537	33,397	13,711	80,166	127,274
Ventures	1,001	442	–	1,443	747	334	–	1,081
Central & other items	22,085	2	4	22,091	29,448	43	3	29,494
Gross loans and advances to customers	146,403	46,768	92,765	285,936	154,320	44,834	92,991	292,145
Impairment provisions	(4,369)	(409)	(126)	(4,904)	(4,872)	(185)	(113)	(5,170)
Net loans and advances to customers	142,034	46,359	92,639	281,032	149,448	44,649	92,878	286,975
Net loans and advances to banks	39,591	3,699	303	43,593	43,955	1,021	1	44,977

Credit quality by industry

Loans and advances

This section provides an analysis of the Group's amortised cost portfolio by industry on a gross, total credit impairment and net basis.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

Amortised cost	2024											
	Stage 1			Stage 2			Stage 3			Total		
	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million
Industry:												
Energy	12,147	(9)	12,138	468	(57)	411	870	(559)	311	13,485	(625)	12,860
Manufacturing	19,942	(12)	19,930	840	(16)	824	418	(305)	113	21,200	(333)	20,867
Financing, insurance and non-banking	34,452	(16)	34,436	1,238	(6)	1,232	154	(142)	12	35,844	(164)	35,680
Transport, telecom and utilities	16,099	(11)	16,088	2,309	(32)	2,277	330	(85)	245	18,738	(128)	18,610
Food and household products	8,425	(8)	8,417	267	(8)	259	251	(198)	53	8,943	(214)	8,729
Commercial real estate	12,135	(10)	12,125	1,714	(126)	1,588	1,485	(1,265)	220	15,334	(1,401)	13,933
Mining and quarrying	5,542	(3)	5,539	287	(12)	275	124	(57)	67	5,953	(72)	5,881
Consumer durables	5,988	(6)	5,982	218	(26)	192	292	(259)	33	6,498	(291)	6,207
Construction	1,925	(2)	1,923	528	(5)	523	171	(160)	11	2,624	(167)	2,457
Trading companies & distributors	589	–	589	24	(1)	23	88	(48)	40	701	(49)	652
Government	28,870	–	28,870	441	(12)	429	205	(18)	187	29,516	(30)	29,486
Other	4,590	(3)	4,587	344	(2)	342	186	(82)	104	5,120	(87)	5,033
Total	150,704	(80)	150,624	8,678	(303)	8,375	4,574	(3,178)	1,396	163,956	(3,561)	160,395
Retail Products:												
Mortgage	75,340	(8)	75,332	896	(2)	894	606	(136)	470	76,842	(146)	76,696
Credit Cards	8,037	(121)	7,916	222	(80)	142	71	(60)	11	8,330	(261)	8,069
Personal Loan and other unsecured lending	10,021	(228)	9,793	238	(53)	185	279	(131)	148	10,538	(412)	10,126
Auto	159	–	159	1	–	1	–	–	–	160	–	160
Secured wealth products	21,404	(37)	21,367	402	(6)	396	518	(353)	165	22,324	(396)	21,928
Other	3,437	(9)	3,428	194	(29)	165	155	(90)	65	3,786	(128)	3,658
Total	118,398	(403)	117,995	1,953	(170)	1,783	1,629	(770)	859	121,980	(1,343)	120,637
Net carrying value (customers) ¹	269,102	(483)	268,619	10,631	(473)	10,158	6,203	(3,948)	2,255	285,936	(4,904)	281,032
Net carrying value (Banks)¹	43,208	(10)	43,198	318	(1)	317	83	(5)	78	43,609	(16)	43,593

¹ Includes reverse repurchase agreements and other similar secured lending held at amortised cost of \$9,660 million for customers and \$2,946 million for Banks.

	Stage 1			Stage 2			Stage 3			Total		
	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million
Amortised cost												
Industry:												
Energy	9,397	(8)	9,389	672	(22)	650	949	(535)	414	11,018	(565)	10,453
Manufacturing	21,239	(8)	21,231	708	(16)	692	656	(436)	220	22,603	(460)	22,143
Financing, insurance and non-banking	31,633	(13)	31,620	571	(1)	570	80	(77)	3	32,284	(91)	32,193
Transport, telecom and utilities	14,710	(8)	14,702	1,722	(36)	1,686	481	(178)	303	16,913	(222)	16,691
Food and household products	7,668	(15)	7,653	323	(7)	316	355	(262)	93	8,346	(284)	8,062
Commercial real estate	12,261	(30)	12,231	1,848	(129)	1,719	1,712	(1,191)	521	15,821	(1,350)	14,471
Mining and quarrying	5,995	(4)	5,991	220	(10)	210	151	(84)	67	6,366	(98)	6,268
Consumer durables	5,815	(3)	5,812	300	(21)	279	329	(298)	31	6,444	(322)	6,122
Construction	2,230	(2)	2,228	502	(8)	494	358	(326)	32	3,090	(336)	2,754
Trading companies & distributors	581	–	581	57	–	57	107	(58)	49	745	(58)	687
Government	33,400	(6)	33,394	1,783	(5)	1,778	367	(33)	334	35,550	(44)	35,506
Other	4,262	(4)	4,258	161	(3)	158	187	(70)	117	4,610	(77)	4,533
Total	149,191	(101)	149,090	8,867	(258)	8,609	5,732	(3,548)	2,184	163,790	(3,907)	159,883
Retail Products:												
Mortgage	81,210	(8)	81,202	1,350	(5)	1,345	519	(123)	396	83,079	(136)	82,943
Credit Cards	7,633	(104)	7,529	244	(65)	179	69	(50)	19	7,946	(219)	7,727
Personal Loan and other unsecured lending	10,867	(188)	10,679	324	(77)	247	315	(165)	150	11,506	(430)	11,076
Auto	310	–	310	1	–	1	1	–	1	312	–	312
Secured wealth products	19,923	(22)	19,901	278	(10)	268	474	(340)	134	20,675	(372)	20,303
Other	4,558	(7)	4,551	161	(5)	156	118	(94)	24	4,837	(106)	4,731
Total	124,501	(329)	124,172	2,358	(162)	2,196	1,496	(772)	724	128,355	(1,263)	127,092
Net carrying value (customers) ¹	273,692	(430)	273,262	11,225	(420)	10,805	7,228	(4,320)	2,908	292,145	(5,170)	286,975
Net carrying value (Banks) ¹	44,384	(8)	44,376	540	(10)	530	77	(6)	71	45,001	(24)	44,977

¹ Includes reverse repurchase agreements and other similar secured lending held at amortised cost of \$13,996 million for customers and \$1,738 million for Banks.

Industry and Retail Products analysis of loans and advances by key geography

This section provides an analysis of the Group's amortised cost loan portfolio, net of provisions, by industry and geography.

The Manufacturing sector group is spread across a diverse range of industries, including automobiles and components, capital goods, pharmaceuticals, biotech and life sciences, technology hardware and equipment, chemicals, paper products and packaging, with lending spread over 3,251 clients.

Corporate & Investment Banking

Amortised Cost	2024							2023 ¹						
	Hong Kong \$million	China \$million	Singapore \$million	UK \$million	US \$million	Other \$million	Total \$million	Hong Kong \$million	China \$million	Singapore \$million	UK \$million	US \$million	Other \$million	Total \$million
Industry:														
Energy	2,200	59	1,552	1,744	1,750	5,551	12,856	3,118	42	1,162	1,341	3,638	1,130	10,431
Manufacturing	4,077	4,200	1,463	389	2,307	8,431	20,867	3,570	4,309	1,666	694	2,921	8,982	22,142
Financing, insurance and non-banking	3,674	3,486	1,893	4,005	9,900	12,696	35,654	3,700	3,570	1,708	1,724	6,627	14,864	32,193
Transport, telecom and utilities	5,131	662	3,106	1,084	936	7,685	18,604	4,634	429	2,499	1,030	630	7,470	16,692
Food and household products	1,038	428	1,414	962	685	4,202	8,729	541	519	911	816	664	4,611	8,062
Commercial Real estate	4,512	334	1,404	1,039	1,650	4,994	13,933	3,895	588	1,125	1,436	1,236	6,192	14,472
Mining and Quarrying	608	606	847	1,426	224	2,170	5,881	1,028	735	427	1,729	279	2,071	6,269
Consumer durables	2,780	293	466	84	537	2,046	6,206	3,030	244	180	177	483	2,008	6,122
Construction	318	156	372	96	247	1,268	2,457	176	163	319	137	389	1,569	2,753
Trading Companies & Distributors	95	103	106	31	40	277	652	119	75	121	31	20	321	687
Government	2,576	117	219	169	4	4,352	7,437	1,445	1	547	236	6	3,814	6,049
Other	1,419	563	786	377	233	1,650	5,028	1,676	265	646	257	264	1,425	4,533
Net Loans and advances to Customers	28,428	11,007	13,628	11,406	18,513	55,322	138,304	26,932	10,940	11,311	9,608	17,157	54,457	130,405
Net Loans and advances to Banks	16,727	2,443	7,721	4,103	2,766	9,833	43,593	17,457	1,996	8,994	3,868	2,544	10,119	44,978

Wealth & Retail Banking

Amortised Cost	2024					2023 ¹				
	Hong Kong \$million	Korea \$million	Singapore \$million	Other \$million	Total \$million	Hong Kong \$million	Korea \$million	Singapore \$million	Other \$million	Total \$million
Retail Products:										
Mortgages	31,506	13,703	13,756	17,731	76,696	32,935	17,157	15,292	17,559	82,943
Credit Cards	3,447	38	1,679	1,517	6,681	3,325	114	1,705	1,549	6,693
Personal Loans and other unsecured lending	1,057	2,796	301	5,972	10,126	950	3,230	220	6,676	11,076
Auto	–	–	122	38	160	–	–	240	72	312
Secured wealth products	5,229	24	10,793	5,882	21,928	5,164	33	9,388	5,718	20,303
Other Retail	579	2,153	72	853	3,657	644	3,149	82	856	4,731
Net Loans and advances to Customers	41,818	18,714	26,723	31,993	119,248	43,018	23,683	26,927	32,430	126,058

1 Amounts have been re-presented from a regional basis (Asia, Africa and Middle East, and Europe and Americas) to key geographies covering the majority of the reported balances.

High carbon sectors

Sectors are identified and grouped as per the International Standard Industrial Classification (ISIC) system and exposure numbers have been updated to include all in-scope ISIC codes used for target setting among the high carbon sectors.

The maximum exposures shown in the table include loans and advances to customers at amortised cost, Fair Value through profit or loss, and committed facilities available as per IFRS 9 – Financial Instruments in \$million.

→ Further details can be found in the 'Summary of Credit Risk performance' section on [page 207](#).

Maximum exposure

	2024						
	Maximum on Balance Sheet Exposure (net of credit impairment) \$million	Collateral \$million	Net On Balance Sheet Exposure \$million	Undrawn Commitments (net of credit impairment) \$million	Financial Guarantees (net of credit impairment) \$million	Net Off Balance Sheet Exposure \$million	Total On & Off Balance Sheet Net Exposure \$million
Amortised Cost							
Industry:							
Automotive manufacturers	3,881	69	3,812	3,331	605	3,936	7,748
Aviation	1,829	960	869	842	928	1,770	2,639
Steel	1,526	316	1,210	816	325	1,141	2,351
Coal Mining	25	–	25	–	–	–	25
Aluminium	1,341	32	1,309	354	53	407	1,716
Cement	709	55	654	637	267	904	1,558
Shipping	7,038	5,037	2,001	2,176	397	2,573	4,574
Commercial Real Estate	7,635	3,400	4,235	2,758	684	3,442	7,677
Oil & Gas	7,421	988	6,433	7,928	7,079	15,007	21,440
Power	6,341	1,500	4,841	4,538	1,124	5,662	10,503
Total¹	37,746	12,357	25,389	23,380	11,462	34,842	60,231
Total Corporate & Investment Banking²	196,823	32,152	164,671	118,106	81,132	199,238	363,909
Total Group³	420,117	121,993	298,124	193,115	90,602	283,717	581,841
2023							
Industry:							
Automotive manufacturers	3,564	65	3,499	3,791	538	4,329	7,828
Aviation	1,330	974	356	944	615	1,559	1,915
Steel	1,596	193	1,403	601	358	959	2,362
Coal Mining	29	9	20	51	99	150	170
Aluminium	526	9	517	338	188	526	1,043
Cement	671	47	624	769	259	1,028	1,652
Shipping	5,964	3,557	2,407	2,261	291	2,552	4,959
Commercial Real Estate	7,498	3,383	4,115	1,587	112	1,699	5,814
Oil & Gas	6,278	894	5,384	7,845	6,944	14,789	20,173
Power	5,411	1,231	4,180	3,982	732	4,714	8,894
Total¹	32,867	10,362	22,505	22,169	10,136	32,305	54,810
Total Corporate & Investment Banking²	188,903	32,744	156,159	104,437	63,183	167,620	323,779
Total Group³	423,276	125,760	297,516	182,299	74,278	256,577	554,093

1 Maximum on balance sheet exposure includes FVTPL amount of High Carbon sector is \$749 million (31 December 2023: \$125 million)

2 Includes on balance sheet FVTPL amount of \$58,519 million (31 December 2023: \$58,498 million) for Corporate & Investment Banking loans to customers

3 Total Group includes net loans and advances to banks and net loans and advances to customers held at amortised cost of \$43,593 million (31 December 2023: \$44,977 million) and \$281,032 million (31 December 2023: \$286,975 million) respectively and loans to banks and loans and advances to customers held at FVTPL of \$36,967 million (31 December 2023: \$32,813 million) and \$58,525 million (31 December 2023: \$58,511 million) respectively. Refer to credit quality table

Maturity and ECL for high-carbon sectors

Sector	2024					2023				
	Loans and advances (Drawn funding) \$million	Maturity Buckets ¹				Loans and advances (Drawn funding) \$million	Maturity Buckets ¹			
		Less than 1 year \$million	More than 1 to 5 years \$million	More than 5 years \$million	Expected Credit Loss \$million		Less than 1 year \$million	More than 1 to 5 years \$million	More than 5 years \$million	Expected Credit Loss \$million
Automotive Manufacturers	3,883	3,458	369	56	2	3,566	3,106	460	–	2
Aviation	1,833	231	404	1,198	4	1,339	149	145	1,045	9
Cement	724	356	368	–	15	719	512	189	18	48
Coal Mining	38	25	13	–	13	42	9	33	–	13
Steel	1,598	941	133	524	72	1,649	1,258	185	206	53
Aluminium	1,352	1,089	177	86	11	537	442	63	32	11
Oil & Gas	7,580	2,601	2,407	2,572	159	6,444	2,980	1,576	1,888	166
Power	6,401	1,700	1,404	3,297	60	5,516	1,933	1,533	2,050	105
Shipping	7,053	1,035	2,450	3,568	15	5,971	1,051	2,568	2,352	7
Commercial Real Estate	7,773	3,880	3,680	213	138	7,664	3,722	3,935	7	166
Total balance¹	38,235	15,316	11,405	11,514	489	33,447	15,162	10,687	7,598	580

1 Gross of credit impairment

Sectors of interest

Commercial Real Estate

	2024						
	Maximum on Balance Sheet Exposure (net of credit impairment) ¹ \$million	Collateral \$million	Net On Balance Sheet Exposure \$million	Undrawn Commitments (net of credit impairment) \$million	Financial Guarantees (net of credit impairment) \$million	Net Off Balance Sheet Exposure \$million	Total On & Off Balance Sheet Net Exposure \$million
Commercial Real Estate	14,037	5,947	8,090	4,932	670	5,602	13,692
	2023						
Commercial Real Estate	14,533	6,363	8,170	4,658	311	4,969	13,139

1 Includes net loans and advances of \$13,933 million (31 December 2023: \$14,471 million) as detailed in the table below

Analysis of credit quality of loans and advances of Commercial Real Estate

	2024 Gross \$million	2023 Gross \$million
Amortised costs		
Strong	7,222	7,326
Satisfactory	6,515	6,751
Higher risk	112	32
Credit impaired (stage 3)	1,485	1,712
Total Gross Balance	15,334	15,821
Strong	(83)	(20)
Satisfactory	(44)	(139)
Higher risk	(9)	–
Credit impaired (stage 3)	(1,265)	(1,191)
Total Credit Impairment	(1,401)	(1,350)
Total Net of Credit Impairment	13,933	14,471
Strong	1.1%	0.3%
Satisfactory	0.7%	2.1%
Higher risk	8.0%	0.0%
Credit impaired (stage 3)	85.1%	69.6%
Cover Ratio	9.1%	8.5%

An analysis of the net CRE loans and advances by key geography, is set out on page 232.

China commercial real estate

The table below represents the on and off-balance sheet items that are exposed to China CRE by credit quality.

→ Further details can be found in the 'Summary of Credit Risk performance' section on page 207.

	2024				2023			
	China \$million	Hong Kong \$million	Rest of Group ¹ \$million	Total \$million	China \$million	Hong Kong \$million	Rest of Group ¹ \$million	Total \$million
Loans to customers	324	1,598	–	1,922	584	1,821	39	2,444
Off balance sheet	1	40	–	41	42	82	–	124
Total as at 31 December	325	1,638	–	1,963	626	1,903	39	2,568
Loans to customers – By Credit quality								
Gross								
Strong	–	12	–	12	33	–	–	33
Satisfactory	172	338	–	510	339	619	39	997
Higher risk	12	42	–	54	8	–	–	8
Credit impaired (stage 3)	140	1,206	–	1,346	204	1,202	–	1,406
Total as at 31 December	324	1,598	–	1,922	584	1,821	39	2,444
Loans to customers – ECL								
Strong	–	–	–	–	–	–	–	–
Satisfactory	(2)	(73)	–	(75)	(3)	(134)	(12)	(149)
Higher risk	–	(1)	–	(1)	–	–	–	–
Credit impaired (stage 3)	(63)	(1,111)	–	(1,174)	(70)	(941)	–	(1,011)
Total as at 31 December	(65)	(1,185)	–	(1,250)	(73)	(1,075)	(12)	(1,160)

1 Rest of Group mainly includes Singapore

Debt securities and other eligible bills (audited)

This section provides further detail on gross debt securities and treasury bills.

The credit quality descriptions in the table below align to those used for CIB and Central and other items, as described on page 212. Debt securities held that have a short-term external rating are reported against the long-term rating of the issuer. For securities that are unrated, the Group applies an internal credit rating, as described under the 'Credit rating and measurement' section on page 201.

Total gross debt securities and other eligible bills decreased by \$16.8 billion to \$144 billion (31 December 2023: \$160 billion) due to maturity of exposures, primarily in stage 1.

Stage 1 gross balance decreased by \$16.5 billion to \$142 billion (31 December 2023: \$158 billion), mainly due to the maturity of exposures in Hong Kong.

Stage 2 gross balance decreased by \$0.2 billion to \$1.6 billion (31 December 2023: \$1.9 billion).

Stage 3 gross balance was broadly stable at \$0.1 billion (31 December 2023: \$0.2 billion).

Amortised cost and FVOCI	2024			2023		
	Gross \$million	ECL \$million	Net ² \$million	Gross \$million	ECL \$million	Net ² \$million
Stage 1	141,862	(23)	141,839	158,314	(26)	158,288
– Strong	138,353	(19)	138,334	155,568	(23)	155,545
– Satisfactory	3,509	(4)	3,505	2,746	(3)	2,743
Stage 2	1,614	(4)	1,610	1,860	(34)	1,826
– Strong	562	–	562	917	(3)	914
– Satisfactory	31	–	31	50	(1)	49
– High Risk	1,021	(4)	1,017	893	(30)	863
Stage 3	103	(2)	101	164	(61)	103
Gross balance¹	143,579	(29)	143,550	160,338	(121)	160,217

1 Stage 3 gross includes \$59 million (31 December 2023: \$80 million) originated credit-impaired debt securities with Nil impairment (31 December 2023: \$14 million)

2 FVOCI instruments are not presented net of ECL on the balance sheet. While the presentation is on a net basis for the table, the total net on-balance sheet amount is \$143,562 million (31 December 2023: \$160,263 million). Refer to the Analysis of financial instrument by stage table

IFRS 9 ECL methodology (audited)

Approach for determining ECL

Credit loss terminology

Component	Definition
Probability of default (PD)	The probability that a counterparty will default, over the next 12 months from the reporting date (stage 1) or over the lifetime of the product (stage 2), incorporating the impact of forward looking economic assumptions that have an effect on Credit Risk, such as unemployment rates and GDP forecasts. The PD estimates will fluctuate in line with the economic cycle. The lifetime (or term structure) PDs are based on statistical models, calibrated using historical data and adjusted to incorporate forward-looking economic assumptions.
Loss given default (LGD)	The loss that is expected to arise on default, incorporating the impact of forward-looking economic assumptions where relevant, which represents the difference between the contractual cashflows due and those that the bank expects to receive. The Group estimates LGD based on the history of recovery rates and considers the recovery of any collateral that is integral to the financial asset, taking into account forward-looking economic assumptions where relevant.
Exposure at default (EAD)	The expected balance sheet exposure at the time of default, taking into account expected changes over the lifetime of the exposure. This incorporates the impact of drawdowns of facilities with limits, repayments of principal and interest, and amortisation.

To determine the ECL, these components are multiplied together: PD for the reference period (up to 12 months or lifetime) x LGD x EAD and discounted to the balance sheet date using the effective interest rate as the discount rate.

IFRS 9 ECL models have been developed for the CIB businesses on a global basis, in line with their respective portfolios. However, for some of the key countries, country-specific models have also been developed.

The calibration of forward-looking information is assessed at a country or region level to take into account local macroeconomic conditions.

Retail ECL models are country and product specific, given the local nature of the WRB business.

For less material retail portfolios, the Group has adopted less sophisticated approaches based on historical roll rates or loss rates:

- For medium-sized retail portfolios, a roll rate model is applied, which uses a matrix that gives the average loan migration rate between delinquency states from period to period. A matrix multiplication is then performed to generate the final PDs by delinquency bucket over different time horizons.
- For smaller retail portfolios, a loss rate approach is applied. These use an adjusted gross charge-off rate, developed using monthly write-off and recoveries over the preceding 12 months and total outstanding balances.
- While the loss rate approaches do not incorporate forward looking information, to the extent that there are significant changes in the macroeconomic forecasts an assessment will be completed on whether an adjustment to the modelled output is required.

For a limited number of exposures, proxy parameters or approaches are used where the data is not available to calculate the origination PDs for the purpose of applying the SICR criteria; or for some retail portfolios where a full history of LGD data is not available, estimates based on the loss experience from similar portfolios are used. The use of proxies is monitored and will reduce over time.

The following processes are in place to assess the ongoing performance of the models:

- Quarterly model monitoring that uses recent data to compare the differences between model predictions and actual outcomes against approved thresholds.
- Annual independent validation is performed by Group Model Validation (GMV); Depth of GMV's validation varies depending on the model materiality. Material models would go through a full annual re-validation process, while a less intensive validation process will be performed on non-material models.

Application of lifetime ECL

ECL is estimated based on the period over which the Group is exposed to Credit Risk. For the majority of exposures this equates to the maximum contractual period. For retail credit cards and corporate overdraft facilities, however, the Group does not typically enforce the contractual period, which can be as short as one day. As a result, the period over which the Group is exposed to Credit Risk for these instruments reflects their behavioural life, which incorporates expectations of customer behaviour and the extent to which Credit Risk management actions curtail the period of that exposure. The average behavioural life for retail credit cards is between 3 and 6 years across our footprint markets.

The behavioural life for corporate overdraft facilities was re-estimated from 24 months to 36 months. The impact of this change was not material.

Composition of credit impairment provisions (audited)

The table below summarises the key components of the Group's credit impairment provision balances at 31 December 2024 and 31 December 2023.

	2024					2023				
	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Ventures \$million	Central & other items \$million ⁴	Total \$million	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Ventures \$million	Central & other items \$million ⁴	Total \$million
Modelled ECL provisions (base forecast)	337	613	61	37	1,048	372	553	48	98	1,071
Impact of multiple economic scenarios ¹	24	19	–	–	43	20	18	–	6	44
Modelled ECL provisions before management judgements	361	632	61	37	1,091	392	571	48	104	1,115
Includes: Model performance post model adjustments	–	14	–	–	14	(3)	(28)	–	–	(31)
Judgemental post model adjustments ²	–	(23)	–	–	(23)	–	2	–	–	2
Management overlays ³										
– China commercial real estate	70	–	–	–	70	141	–	–	–	141
– Other	109	27	7	–	143	–	5	–	17	22
Total modelled provisions	540	636	68	37	1,281	533	578	48	121	1,280
Of which:										
Stage 1	133	392	30	34	589	151	325	15	68	559
Stage 2	362	151	27	1	541	318	140	21	49	528
Stage 3	45	93	11	2	151	64	113	12	4	193
Stage 3 non-modelled provisions	3,267	665	–	54	3,986	3,587	646	–	88	4,321
Total credit impairment provisions	3,807	1,301	68	91	5,267	4,120	1,224	48	209	5,601

1 Includes upwards judgemental post-model adjustment of \$28 million (31 December 2023: nil)

2 Excludes \$28 million upwards judgemental post-model adjustment which is included in 'Impact of multiple economic scenarios'

3 \$32 million (31 December 2023: \$22 million) is in stage 1, \$181 million (31 December 2023: \$141 million) in stage 2 and \$nil million (31 December 2023: nil) in stage 3

4 Includes ECL on cash and balances at central banks, accrued income, assets held for sale and other assets

Model performance post model adjustments (PMAs)

As part of model monitoring and independent validation processes, where a model's performance breaches the approved monitoring thresholds or validation standards, an assessment is performed to determine whether a model performance PMA is required to temporarily remediate the model issue. The process for the determination of PMAs is set out in the 'Governance of PMAs and application of expert credit judgement in respect of ECL' section on page 246.

As at 31 December 2024, model performance PMAs have been applied for five models out of the total of 110 models. In aggregate, these PMAs increase the Group's impairment provisions by \$14 million (1 per cent of modelled provisions) compared with a \$31 million decrease at 31 December 2023. The reduction was primarily due to the implementation of new models, thereby removing the need for PMAs on the old models.

In addition to these model performance PMAs, separate judgemental post model and management adjustments have also been applied as set out on page 241.

	2024 \$million	2023 \$million
Model performance PMAs		
Corporate & Investment Banking	–	(3)
Wealth & Retail Banking	14	(28)
Total model performance PMAs	14	(31)

Key assumptions and judgements in determining ECL

Incorporation of forward-looking information

The evolving economic environment is a key determinant of the ability of a bank's clients to meet their obligations as they fall due. It is a fundamental principle of IFRS 9 that the provisions banks hold against potential future Credit Risk losses should depend, not just on the health of the economy today, but should also take into account potential changes to the economic environment. For example, if a bank were to anticipate a sharp slowdown in the world economy over the coming year, it should hold more provisions today to absorb the credit losses likely to occur in the near future.

To capture the effect of changes to the economic environment, the PDs and LGDs used to calculate ECL incorporate forward-looking information in the form of forecasts of the values of economic variables and asset prices that are likely to have an effect on the repayment ability of the Group's clients.

The 'base forecast' of the economic variables and asset prices is based on management's view of the five-year outlook, supported by projections from the Group's in-house research team and outputs from a third-party model that project specific economic variables and asset prices. The research team takes consensus views into consideration, and senior management review projections for some core country variables against consensus when forming their view of the outlook. For the period beyond five years, management utilises the in-house research view and third-party model outputs, which allow for a reversion to long-term growth rates or norms. All projections are updated on a quarterly basis.

Forecast of key macroeconomic variables underlying the ECL calculation and the impact on non-linearity

In the Base Forecast – management's view of the most likely outcome – the pace of growth of the world economy is expected to remain broadly unchanged from 2024 at around 3 per cent in 2025. This compares to the average of 3.7 per cent growth for the 10 years prior to COVID-19 (between 2010 and 2019). Support from easing financial conditions and expansionary fiscal policy may be partly offset by protectionist trade policies and still-high interest rates in the US and elsewhere. The US economy is set to moderate in 2025, after a resilient 2024 performance despite elevated interest rates. The euro area continues to struggle with major European economies including Germany and France who risk slipping into recession. Asia is relatively healthy, although growth at the regional level is set to moderate slightly in 2025 as both China and India slow down. The Middle-East is expected also to remain a bright spot for global growth, with the region's non-oil growth exceeding overall global growth.

The uncertainty around the economic outlook remains elevated. In particular, the change in US Presidency is expected to lead to significant changes in US policies, including new and higher tariffs on key US trading partners. On the geopolitical front, tensions remain elevated over the conflict in Ukraine and the situation in the Middle-East.

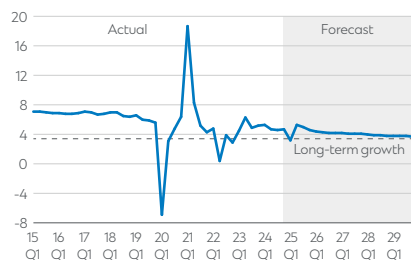
While the quarterly Base Forecasts inform the Group's strategic plan, one key requirement of IFRS 9 is that the assessment of provisions should consider multiple future economic environments. For example, the global economy may grow more quickly or more slowly than the Base Forecast, and these variations would have different implications for the provisions that the Group should hold today. As the negative impact of an economic downturn on credit losses tends to be greater than the positive impact of an economic upturn, if the Group sets provisions only on the ECL under the Base Forecast it might maintain a level of provisions that does not appropriately capture the range of potential outcomes. To address the inherent uncertainty in economic forecast, and the property of skewness (or non-linearity), IFRS 9 requires reported ECL to be a probability-weighted ECL, calculated over a range of possible outcomes.

To assess the range of possible outcomes the Group simulates a set of 50 scenarios around the Base Forecast, calculates the ECL under each of them and assigns an equal weight of 2 per cent to each scenario outcome. These scenarios are generated by a Monte Carlo simulation, which addresses the challenges of crafting many realistic alternative scenarios in the many countries in which the Group operates by means of a model, which produces these alternative scenarios while considering the degree of historical uncertainty (or volatility) observed from Q1 1990 to Q3 2023 around economic outcomes, the trends in each macroeconomic variable modelled and the correlation in the unexplained movements around these trends. This naturally means that each of the 50 scenarios do not have a specific narrative, although collectively they explore a range of hypothetical alternative outcomes for the global economy, including scenarios that turn out better than expected and scenarios that amplify anticipated stresses.

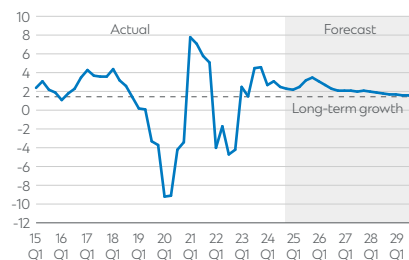
The GDP graphs below illustrate the shape of the Base Forecast for key footprint markets in relation to prior periods' actuals. The long-term growth rates are based on the pace of economic expansion expected for 2030. The tables below provide a summary of the Group's Base Forecast for these markets. The peak/trough amounts show the highest and lowest points within the Base Forecast.

China's GDP growth is expected to ease slightly to 4.5 per cent in 2025 from 4.8 per cent in 2024. This reflects persistent weakness in the property sector, though it is expected to moderate external headwinds and low consumer confidence. Growth in India is also expected to ease with GDP expanding by 6.5 per cent from 6.9 per cent in 2024 as the impact from recent one-off factors such as construction activity and electricity demand (amid below normal rains) fade. GDP growth for Singapore is expected to slow to 2.4 per cent in 2025 from 3.5 per cent last year. An uncertain global trade outlook will weigh on sentiment in trade-reliant economies. Recent economic activity may have also been partly driven by front-loading of orders of electronics ahead of potentially negative trade policies in 2025. Similarly, the uncertain external environment and likely trade protectionist measures will limit the upside to growth for both South Korea and Hong Kong which are expected to grow by 2.0 per cent and 2.9 per cent respectively in 2025.

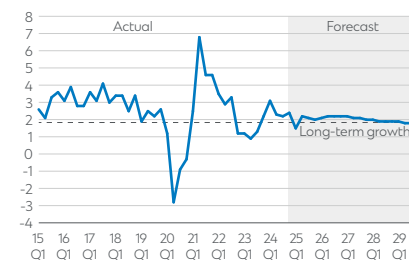
China GDP YoY%



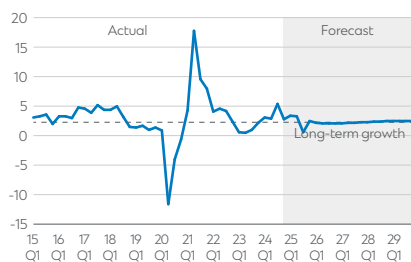
Hong Kong GDP YoY%



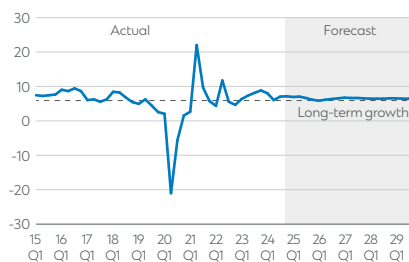
Korea GDP YoY%



Singapore GDP YoY%



India GDP YoY%



2024 year-end forecasts

	China				Hong Kong			
	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices ⁵ (YoY %)	GDP growth (YoY %)	Unemployment %	3-month interest rates %	House prices (YoY %)
Base forecast¹								
2024	4.8	3.6	2.0	(3.7)	2.6	3.0	4.4	(11.1)
2025	4.5	3.5	1.7	(5.3)	2.9	3.1	2.5	1.8
2026	4.3	3.3	1.6	(3.2)	2.5	3.2	2.2	6.5
2027	4.1	3.2	1.6	(0.9)	2.1	3.2	2.4	4.8
2028	3.9	3.2	1.8	0.9	1.9	3.2	2.4	3.4
5-year average²	4.1	3.3	1.7	(1.3)	2.2	3.1	2.4	3.8
Quarterly peak	5.3	3.5	1.9	2.3	3.5	3.2	2.9	6.8
Quarterly trough	3.2	3.1	1.6	(5.6)	1.5	3.0	2.1	(2.6)
Monte Carlo								
Low ³	(1.0)	2.8	0.6	(10.1)	(1.8)	1.8	0.3	(13.1)
High ⁴	9.3	3.7	3.0	7.8	5.8	5.1	5.3	22.2

2024 year-end forecasts

	Singapore				Korea			
	GDP growth (YoY%)	Unemployment ⁶ %	3-month interest rates %	House prices (YoY%)	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices (YoY %)
Base forecast¹								
2024	3.5	2.9	3.6	4.3	2.5	2.8	3.6	(0.4)
2025	2.4	2.7	1.9	0.4	2.0	2.8	3.0	4.3
2026	2.1	2.7	1.9	2.2	2.2	2.8	2.9	3.4
2027	2.2	2.7	2.0	3.0	2.1	2.8	2.9	2.4
2028	2.4	2.7	2.0	3.1	1.9	2.8	2.9	2.1
5-year average²	2.3	2.7	2.0	2.4	2.0	2.8	2.9	2.8
Quarterly peak	3.4	2.8	2.4	3.2	2.2	2.9	3.2	4.8
Quarterly trough	0.6	2.7	1.6	(0.4)	1.5	2.8	2.9	1.9
Monte Carlo								
Low ³	(2.7)	2.0	0.3	(10.5)	(1.3)	2.2	0.8	(4.3)
High ⁴	7.0	3.6	3.9	17.5	5.2	3.5	5.7	9.8

2024 year-end forecasts					
India					
	GDP growth (YoY%)	Unemployment ⁷ %	3-month interest rates %	House prices (YoY%)	Brent Crude \$ pb
Base forecast¹					
2024	6.9	NA	6.4	6.3	78.3
2025	6.5	NA	6.1	6.5	77.1
2026	6.5	NA	6.0	6.4	76.4
2027	6.6	NA	6.0	6.4	77.3
2028	6.6	NA	6.0	6.3	75.3
5-year average²	6.6	NA	6.0	6.4	76.2
Quarterly peak	7.1	NA	6.2	7.3	77.8
Quarterly trough	5.9	NA	6.0	6.0	74.8
Monte Carlo					
Low ³	3.2	NA	1.9	(0.1)	44.5
High ⁴	10.0	NA	10.3	12.6	107.8

2023 year-end forecasts								
China					Hong Kong			
	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices ⁵ (YoY%)	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices (YoY%)
5-year average²	4.3	4.0	2.1	4.6	2.5	3.4	3.4	2.8
Quarterly peak	5.7	4.1	2.5	7.2	3.8	3.4	5.0	4.6
Quarterly trough	3.8	3.8	1.7	1.5	1.5	3.4	2.3	(1.1)
Monte Carlo								
Low ³	0.6	3.3	0.8	(1.5)	(3.8)	1.4	0.3	(19.3)
High ⁴	7.7	4.4	3.8	12.0	8.2	6.4	8.3	25.5

2023 year-end forecasts								
Singapore					Korea			
	GDP growth (YoY%)	Unemployment ⁶ %	3-month interest rates %	House prices (YoY%)	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices (YoY%)
5-year average²	2.9	2.8	2.9	2.2	2.3	3.1	3.1	3.3
Quarterly peak	3.8	2.9	4.1	3.9	2.6	3.5	3.7	5.3
Quarterly trough	1.9	2.8	2.3	(0.7)	2.0	3.0	3.1	(0.3)
Monte Carlo								
Low ³	(2.4)	1.7	0.6	(16.2)	(2.3)	1.4	0.7	(6.1)
High ⁴	8.5	3.8	5.9	19.2	7.0	5.8	6.3	12.5

2023 year-end forecasts					
India					
	GDP growth (YoY%)	Unemployment %	3-month interest rates %	House prices (YoY%)	Brent crude \$ pb
5-year average²	6.2	NA	6.2	6.1	88.2
Quarterly peak	9.1	NA	6.3	6.5	93.8
Quarterly trough	4.4	NA	5.8	4.7	82.8
Monte Carlo					
Low ³	2.1	NA	2.7	(0.5)	46.0
High ⁴	10.5	NA	9.9	13.8	137.8

1 Data presented are those used in the calculation of ECL and presented as average growth for the year. These may differ slightly to forecasts presented elsewhere in the Annual Report as they are finalised before the period end

2 5 year averages covering 20 quarters from Q1 2025 to Q4 2029 for the 2024 annual report. They cover Q1 2024 to Q4 2028 for the numbers reported for the 2023 annual report

3 Represents the 10th percentile in the range of economic scenarios used to determine non-linearity

4 Represents the 90th percentile in the range of economic scenarios used to determine non-linearity

5 A judgemental management adjustment is held in respect of the China commercial real estate sector, as discussed on page 241

6 Singapore unemployment rate covers the resident unemployment rate, which refers to citizens and permanent residents

7 India unemployment is not available due to insufficient data

Impact of multiple economic scenarios

The final probability weighted ECL reported by the Group is a simple average of the ECL for each of the 50 scenarios simulated using a Monte Carlo model. The Monte Carlo approach has the advantage that it generates many alternative scenarios that cover our global footprint. The range of scenarios is restricted through the use of ceilings and floors applied to the underlying macroeconomic variables. The current set of ceilings and floors generated a relatively narrow range of forecasts at 31 December 2024 and will be redeveloped in the first quarter of 2025.

Prior to this, a \$28 million non-linearity PMA has been applied, \$13 million for CIB and \$15 million for WRB. The total amount of non-linearity has been estimated by assigning probability weights of 68 per cent, 22 per cent and 10 per cent respectively to the Base Forecast, 'Higher for Longer Commodities and Rates', and 'Global Trade and Geopolitical Tensions' scenarios which are presented on page 243 and comparing this to the unweighted Base Forecast ECL. The non-linearity PMA represents the difference between the probability weighted ECL calculated using the three scenarios and the probability weighted ECL calculated by the Monte Carlo model.

The total amount of non-linearity including the PMA is \$43 million (31 December 2023: \$44 million). The CIB portfolio accounted for \$24 million (31 December 2023: \$20 million) of the calculated non-linearity, with the remaining \$19 million (31 December 2023: \$18 million) attributable to WRB portfolios.

The impact of multiple economic scenarios on total modelled ECL is set out in the table below, together with the management overlay and other judgemental adjustments.

	Base forecast \$million	Multiple economic scenarios ¹ \$million	Management overlays and other judgemental adjustments \$million	Total modelled ECL ² \$million
Total modelled expected credit loss at 31 December 2024	1,048	43	190	1,281
Total modelled expected credit loss at 31 December 2023	1,071	44	165	1,280

1 Includes an upwards judgemental PMA of \$28 million (31 December 2023: nil)

2 Total modelled ECL comprises stage 1 and stage 2 balances of \$1,130 million (31 December 2023: \$1,105 million) and \$151 million (31 December 2023: \$193 million) of modelled ECL on stage 3 loans

The average ECL under multiple scenarios is 4 per cent (31 December 2023: 4 per cent) higher than the ECL calculated using only the most likely scenario (the Base Forecast). Portfolios that are more sensitive to non-linearity include those with greater leverage and/or a longer tenor, such as Project and Shipping Finance portfolios. Other portfolios display minimal non-linearity owing to limited responsiveness to macroeconomic impacts for structural reasons, such as significant collateralisation as with the WRB mortgage portfolios.

Judgemental adjustments

As at 31 December 2024, the Group held judgemental adjustments for ECL as set out in the table below. All of the judgemental adjustments have been determined after taking account of the model performance PMAs reported on page 237. They are reassessed quarterly and are reviewed and approved by the IFRS 9 Impairment Committee (IIC) and will be released when no longer relevant.

	Corporate & Investment Banking \$million	Mortgages \$million	Wealth & Retail Banking Credit Cards \$million	Other \$million	Total \$million	Ventures \$million	Central & other \$million	Total \$million
31 December 2024								
Judgemental post model adjustments	13	-	9	(17)	(8)	-	-	5
Judgemental management overlays:								
- China CRE	70	-	-	-	-	-	-	70
- Other	109	-	5	22	27	7	-	143
Total judgemental adjustments	192	-	14	5	19	7	-	218
Judgemental adjustments by stage:								
Stage 1	27	-	10	(11)	(1)	4	-	30
Stage 2	165	-	5	25	30	3	-	198
Stage 3	-	-	(1)	(9)	(10)	-	-	(10)
31 December 2023								
Judgemental post model adjustments	-	-	1	1	2	-	-	2
Judgemental management overlays:								
- China CRE	141	-	-	-	-	-	-	141
- Other	-	1	2	2	5	-	17	22
Total judgemental adjustments	141	1	3	3	7	-	17	165
Judgemental adjustments by stage:								
Stage 1	17	1	3	6	10	-	-	27
Stage 2	124	-	-	(3)	(3)	-	17	138
Stage 3	-	-	-	-	-	-	-	-

Judgemental PMAs

As at 31 December 2024, judgemental PMAs to increase ECL by a net \$5 million (31 December 2023: \$2 million increase) have been applied. \$28 million (31 December 2023: nil) of the increase in ECL related to multiple economic scenarios, \$13 million in CIB and \$15 million in WRB (see 'Impact of multiple economic scenarios' section). This was partly offset by a reduction of ECL of \$23 million for certain WRB models, primarily to adjust for temporary factors impacting modelled outputs. These will be released when these factors normalise.

Judgemental management overlays

China CRE

The real estate market in China has been in a downturn since late 2021, as evidenced by continued decline in sales, and investments in the sector. Liquidity issues experienced by Chinese property developers continued into 2023, with more developers defaulting on their obligations both offshore and onshore. During 2023, authorities on the mainland introduced a slew of policies to help revive the sector and restore buying sentiments. Relaxed monetary policy and fiscal stimulus packages continued in 2024, which had assisted in arresting the drop in new home sales and stabilising new home sales in late 2024 to an extent in some cities, but home prices remain muted overall. Continued policy relaxations, including those related to house purchase restrictions, completion support for eligible projects from onshore financial institutions, relaxation in mortgage rates, and further support for affordable housing, are key for reversing the continued decline in sales and investments and ensuring continued stabilisation in 2025.

The Group's loans and advances to China CRE clients was \$1.9 billion at 31 December 2024 (31 December 2023: \$2.4 billion). Heightened risk management continues to be carried out, with a focus on managing upcoming maturities through refinancing and/or repayment. No new financing transactions were entered into, and total repayments amounted to around \$500 million during 2024. Clients with exposure maturing within the next 12 months have been placed on purely precautionary or non-purely precautionary early alert, where appropriate, for closer monitoring. Given the evolving nature of the risks in the China CRE sector, a management overlay of \$70 million (31 December 2023: \$141 million) has been taken by estimating the impact of further deterioration to exposures in this sector. The decrease from 31 December 2023 was primarily driven by repayments and utilisation due to movement to stage 3.

Other

In CIB, additional overlays of \$109 million (31 December 2023: nil) have been taken, \$58 million of which is in Hong Kong, with the remainder relating to Bangladesh and an immaterial amount for climate risks. The overlay in Hong Kong reflects subdued economic activity and increasing commercial property vacancy rates, which contributes to an uncertain outlook that are not yet fully reflected in the credit grades and modelled ECL. The risk of further impairment remains as a result of subdued economic activity in the property sector and the related liquidity constraints faced by counterparties as a result. The overlay in Bangladesh reflects the political situation that has contributed to an increasing level of uncertainty in the macroeconomic outlook. The overlays for Hong Kong and Bangladesh have been determined by estimating the impact of a deterioration to certain exposures in these countries.

In WRB, overlays of \$27 million includes \$21 million in Korea to cover the risks relating to the failure of two e-commerce payment platforms in 2024, increased bankruptcy trends in certain markets and an immaterial adjustment for climate risks.

Further details on the adjustment for Climate Risk are set out in Note 1 of the 'Notes to the financial statements' section.

Overlays held at 31 December 2023 of \$5 million in WRB to capture macroeconomic environment challenges caused by sovereign defaults or heightened sovereign risk, and \$17 million applied in Central and other items due to a temporary market dislocation in the Africa and Middle East region which were fully released during 2024.

Stage 3 assets

Credit-impaired assets managed by Stressed Asset Group (SAG) incorporate forward-looking economic assumptions in respect of the recovery outcomes identified and are assigned individual probability weightings per IFRS 9. These assumptions are not based on a Monte Carlo simulation but are informed by the Base Forecast.

Sensitivity of ECL calculation to macroeconomic variables

The ECL calculation relies on multiple variables and is inherently non-linear and portfolio-dependent, which implies that no single analysis can fully demonstrate the sensitivity of the ECL to changes in the macroeconomic variables. The Group has conducted a series of analyses with the aim of identifying the macroeconomic variables which might have the greatest impact on the overall ECL. These encompassed single variable and multi-variable exercises, using simple up/down variation and extracts from actual calculation data, as well as bespoke scenario design assessments.

The primary conclusion of these exercises is that no individual macroeconomic variable is materially influential. The Group believes this is plausible as the number of variables used in the ECL calculation is large. This does not mean that macroeconomic variables are uninfluential; rather, that the Group believes that consideration of macroeconomics should involve whole scenarios, as this aligns with the multi-variable nature of the calculation.

The Group faces downside risks in the operating environment related to the uncertainties surrounding the macroeconomic outlook. To explore this, a sensitivity analysis of ECL was undertaken to explore the effect of slower economic recoveries across the Group's footprint markets. Two downside scenarios were considered in particular to explore the current uncertainties over commodity prices. The 'Global Trade and Geopolitical Tensions' scenario is characterised by an escalating trade war between the US and China and other economies. The 'Higher for Longer Commodities and Rates' scenario explores the impact from stickier than expected inflation due to persistent shipping disruptions and rise in energy prices amid fears of an escalation of the Middle East conflict.

	Baseline		Global Trade and Geopolitical Tensions		Higher for longer: Commodities and Rates	
	Five year average	Peak/Trough	Five year average	Peak/Trough	Five year average	Peak/Trough
China GDP	4.1	5.3/3.2	0.8	3.8/(2.6)	3.5	4.3/1.8
China unemployment	3.3	3.5/3.1	4.9	5.5/3.8	4.3	5.2/3.1
China property prices	(1.3)	2.3/(5.6)	(5.1)	11.1/(47.6)	(1.4)	8.6/(24.5)
Hong Kong GDP	2.2	3.5/1.5	(1.0)	1.6/(8.0)	1.4	2.2/(0.1)
Hong Kong unemployment	3.1	3.2/3.0	6.2	7.2/3.7	4.7	6.3/3.2
Hong Kong property prices	3.8	6.8/(2.6)	(0.1)	30.9/(34.8)	2.8	8.9/(3.5)
US GDP	2.0	2.6/1.1	0.3	2.2/(3.2)	1.1	2.5/(2.1)
Singapore GDP	2.3	3.4/0.6	0.0	3.1/(5.9)	1.6	2.8/(2.3)
India GDP	6.6	7.1/5.9	4.7	6.7/0.8	6.1	7.4/4.3
Crude oil	76.2	77.8/74.8	59.1	86.2/46.2	84.9	113.4/74.8

Period covered from Q1 2025 to Q4 2029

	Base (GDP, YoY%)					Global Trade and Geopolitical Tensions					Difference from Base				
	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029
China	4.5	4.3	4.1	3.9	3.8	2.1	(2.0)	(1.0)	1.4	3.5	(2.4)	(6.3)	(5.1)	(2.6)	(0.3)
Hong Kong	2.9	2.5	2.1	1.9	1.6	(6.3)	(1.4)	0.1	0.9	1.4	(9.1)	(3.9)	(2.0)	(1.0)	(0.2)
US	1.4	2.2	2.4	2.1	2.0	(0.9)	(2.2)	0.8	1.8	2.2	(2.3)	(4.4)	(1.6)	(0.3)	0.1
Singapore	2.4	2.1	2.2	2.4	2.5	(2.9)	(3.5)	1.0	2.8	2.6	(5.3)	(5.6)	(1.2)	0.4	0.1
India	6.8	6.3	6.7	6.5	6.5	4.6	1.8	5.3	5.8	6.1	(2.2)	(4.4)	(1.4)	(0.8)	(0.4)

Each year is from Q1 to Q4. For example 2025 is from Q1 2025 to Q4 2025.

	Base (GDP, YoY%)					Higher for longer: Commodities and Rates					Difference from Base				
	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029
China	4.5	4.3	4.1	3.9	3.8	2.5	3.3	4.1	3.9	3.8	(2.0)	(1.0)	0.0	0.0	(0.0)
Hong Kong	2.9	2.5	2.1	1.9	1.6	0.3	1.1	2.1	1.9	1.6	(2.6)	(1.4)	(0.0)	(0.0)	0.0
US	1.4	2.2	2.4	2.1	2.0	(1.4)	0.5	2.4	2.1	2.0	(2.8)	(1.7)	(0.0)	0.0	0.0
Singapore	2.4	2.1	2.2	2.4	2.5	(0.2)	0.9	2.2	2.4	2.5	(2.6)	(1.2)	(0.0)	(0.0)	0.0
India	6.8	6.3	6.7	6.5	6.5	4.9	5.8	6.7	6.5	6.5	(1.9)	(0.5)	(0.0)	0.0	0.0

Each year is from Q1 to Q4. For example 2025 is from Q1 2025 to Q4 2025

The total modelled stage 1 and 2 ECL provisions (including both on and off-balance sheet instruments) would be approximately \$84 million higher under the 'Higher for Longer Commodities and Rates' scenario, and \$258 million higher under the 'Global Trade and Geopolitical Tensions' scenario than the baseline ECL provisions (which excluded the impact of multiple economic scenarios and management overlays which may already capture some of the risks in these scenarios). Stage 2 exposures as a proportion of stage 1 and 2 exposures would increase from 2.7 per cent in the base case to 2.8 per cent and 3.5 per cent respectively under the 'Higher for Longer Commodities and Rates', and 'Global Trade and Geopolitical Tensions' scenarios. This includes the impact of exposures transferring to stage 2 from stage 1 but does not consider an increase in stage 3 defaults.

Under both scenarios, the majority of the increase in ECL in CIB came from the main corporate CRE and Project Finance portfolios. For the main corporate portfolios, ECL would increase by \$18 million and \$47 million for 'Higher for Longer Commodities and Rates', and 'Global Trade and Geopolitical Tensions' scenarios respectively and the proportion of stage 2 exposures would increase from 4.1 per cent in the base case to 4.3 per cent and 6.1 per cent respectively.

For the WRB portfolios, most of the increase in ECL came from the unsecured retail portfolios, particularly Korea Personal Loans and the credit card portfolios in Hong Kong and Singapore, although Private Banking was also impacted in the 'Global Trade and Geopolitical Tensions' scenario. Under the 'Higher for Longer Commodities and Rates', and 'Global Trade and Geopolitical Tensions' scenarios, Credit card ECL would increase by \$18 million and \$32 million respectively, largely in the Singapore and Hong Kong portfolios and the proportion of stage 2 credit card exposures would increase from 1.8 per cent in the base case to 2.3 per cent and 2.9 per cent for each scenario respectively, with the Singapore portfolio most impacted. Mortgages ECL would increase by \$2 million and \$19 million for each scenario respectively, with portfolios in Korea impacted in the 'Higher for Longer Commodities and Rates' scenario, and Malaysia in the 'Global Trade and Geopolitical Tensions' scenario, and the proportion of stage 2 mortgages would increase from 1.0 per cent in the base case to 1.4 per cent and 1.3 per cent respectively.

There was no material change in modelled stage 3 provisions as these primarily relate to unsecured WRB exposures for which the LGD is not sensitive to changes in the macroeconomic forecasts. There is also no material change for non-modelled stage 3 exposures as these are more sensitive to client specific factors than to alternative macroeconomic scenarios.

The actual outcome of any scenario may be materially different due to, among other factors, the effect of management actions to mitigate potential increases in risk and changes in the underlying portfolio.

	Gross as reported ¹ \$million	ECL as reported ² \$million	ECL Base case \$million	Higher for Longer Commodities and Rates \$million	Global Trade and Geopolitical Tensions \$million
Stage 1 modelled					
Corporate & Investment Banking	367,106	106	95	113	125
Wealth & Retail Banking	179,580	397	387	406	428
Ventures	1,391	27	27	27	27
Central & Other items	172,602	22	22	23	25
Total stage 1 excluding management judgements	720,679	552	531	569	605
Stage 2 modelled					
Corporate & Investment Banking	14,869	198	185	206	315
Wealth & Retail Banking	2,030	116	107	132	161
Ventures	48	24	24	24	24
Central & Other items	1,660	1	1	1	1
Total stage 2 excluding management judgements	18,607	339	317	363	501
Total Stage 1 & 2 modelled					
Corporate & Investment Banking	381,975	304	280	319	440
Wealth & Retail Banking	181,610	513	494	538	589
Ventures	1,439	51	51	51	51
Central & Other items	174,262	23	23	24	26
Total excluding management judgements	739,286	891	848	932	1,106
Stage 3 exposures excluding other assets	6,999	4,095			
Other financial assets³	101,755	63			
ECL from management judgements		218			
Total financial assets reported at 31 December 2024	848,040	5,267			

1 Gross balances includes both on- and off- balance sheet instruments; allocation between stage 1 and 2 will differ by scenario

2 Includes ECL for both on- and off-balance sheet instruments

3 Includes cash and balances at central banks, Accrued income, Other financial assets; and Assets held for sale

Significant increase in Credit Risk (SICR)

Quantitative criteria

SICR is assessed by comparing the risk of default at the reporting date to the risk of default at origination. Whether a change in the risk of default is significant or not is assessed using quantitative and qualitative criteria. These criteria have been separately defined for each business and where meaningful are consistently applied across business lines.

Assets are considered to have experienced SICR if they have breached both relative and absolute thresholds for the change in the average annualised IFRS 9 lifetime probability of default (IFRS 9 PD) over the residual term of the exposure.

The absolute measure of increase in credit risk is used to capture instances where the IFRS 9 PDs on exposures are relatively low at initial recognition as these may increase by several multiples without representing a significant increase in credit risk. Where IFRS 9 PDs are relatively high at initial recognition, a relative measure is more appropriate in assessing whether there is a significant increase in credit risk, as the IFRS 9 PDs increase more quickly.

The SICR thresholds have been calibrated based on the following principles:

- **Stability** – The thresholds are set to achieve a stable stage 2 population at a portfolio level, trying to minimise the number of accounts moving back and forth between stage 1 and stage 2 in a short period of time
- **Accuracy** – The thresholds are set such that there is a materially higher propensity for stage 2 exposures to eventually default than is the case for stage 1 exposures
- **Dependency from backstops** – The thresholds are stringent enough such that a high proportion of accounts transfer to stage 2 due to movements in forward-looking IFRS 9 PDs rather than relying on backward-looking backstops such as arrears

- Relationship with business and product risk profiles – the thresholds reflect the relative risk differences between different products, and are aligned to business processes

For CIB clients the quantitative thresholds are a relative 100 per cent increase in IFRS 9 PD and an absolute change in IFRS 9 PD of between 50 and 100 bps for investment grade and sub-investment grade assets. For debt securities originated before 1 January 2018, the bank is utilising the low Credit Risk simplified approach, where debt securities with an internal credit rating mapped to an investment grade equivalent are allocated to stage 1 and all other debt securities are allocated to stage 2.

For WRB (excluding Private Banking) clients, portfolio specific quantitative thresholds are applied to Credit Card portfolios in Hong Kong, Singapore, Malaysia and UAE and Personal Loan portfolios in Taiwan (with a revision to the thresholds applied in 2024). During 2024 portfolio specific quantitative thresholds are also now being applied to Hong Kong Personal Loans and Business Clients Mortgage portfolio in India. The impact of the threshold changes in 2024 was not material. For Credit Card portfolios, the thresholds include relative and absolute increases in IFRS 9 PD with average lifetime IFRS 9 PD cut-offs for those exposures that are within a range of customer utilisation limit. For Personal Loans portfolios, the thresholds include relative and absolute increases in IFRS 9 PD cut-offs for those exposures that are over six months old in the portfolio, have certain months left in the loan tenor and have certain behaviour scores. For Business Clients Mortgage, the threshold includes relative and absolute increases in IFRS 9 PD cut-offs for those exposures that were in high arrear grade bucket at least once in the last 12 months.

The range of thresholds applied are:

Portfolio	Relative IFRS 9 PD increase (%)	Absolute IFRS 9 PD increase (%)	Customer utilisation (%)	Remaining tenor (months)	Average IFRS 9 PD (lifetime)
Credit cards – Current	50–150%	3.4% – 9.3%	15% – 90%	–	4.51% – 11.6%
Credit cards – 1-29 days past due	100% – 210%	3.5% – 6.1%	25% – 67%	–	1.5% – 18.5%
Personal loans – Current	100% – 250%	1.0%	–	>60	–
Personal loan – 1-29 days past due	200% – 300%	1.5%	–	>12	–
Business Client Mortgages – Current	100%	4.4%	–	–	–
Business Client Mortgages – 1-29 days past due	100%	7.0%	–	–	–

For all other material WRB portfolios (excluding Private Banking) for which a statistical model has been built, the quantitative SICR thresholds applied are a relative threshold of 100 per cent increase in IFRS 9 PD and an absolute change in IFRS 9 PD of between 100 and 350 bps depending on the product. Certain countries have a higher absolute threshold reflecting the lower default rate within their personal loan portfolios compared with the Group's other personal loan portfolios. The original lifetime IFRS 9 PD term structure is determined based on the original application score or risk segment of the client.

For all Private Banking classes, in line with risk management practice, an increase in credit risk is deemed to have occurred where margining or loan-to-value covenants have been breached. For Class I assets (lending against diversified liquid collateral), if these margining requirements have not been met within 30 days of a trigger, a significant increase in credit risk is assumed to have occurred. For Class I and Class III assets (real-estate lending), a significant increase in credit risk is assumed to have occurred where the bank is unable to 'sell down' the applicable assets to meet revised collateral requirements within five days of a trigger. Class II assets are typically unsecured or partially secured, or secured against illiquid collateral such as shares in private companies. Significant credit deterioration of these assets is deemed to have occurred when any early alert trigger has been breached.

Qualitative criteria

Qualitative factors that indicate that there has been a significant increase in credit risk include processes linked to current risk management, such as placing loans on non-purely precautionary early alert or being assigned a CG12 rating. An account is placed on non-purely precautionary early alert if it exhibits risk or potential weaknesses of a material nature requiring closer monitoring, supervision or attention by management. Weaknesses in such a borrower's account, if left uncorrected, could result in deterioration of repayment prospects and the likelihood of being downgraded. Indicators could include a rapid erosion of position within the industry, concerns over management's ability to manage operations, weak/deteriorating operating results, liquidity strain and overdue balances, among other factors.

All client assets that have been assigned a CG12 rating, equivalent to 'Higher risk', are deemed to have experienced a significant increase in credit risk. Accounts rated CG12 are primarily managed by relationship managers in the CIB unit with support from SAG for certain accounts. All CIB clients are placed in CG12 when they are 30 DPD unless they are granted a waiver through a strict governance process.

In WRB, SICR is also assessed for where specific risk elevation events have occurred in a market that are not yet reflected in modelled outcomes or in other metrics. This is applied collectively either to impacted specific products/customer cohorts or across the overall consumer banking portfolio in the affected market.

Backstop

Across all portfolios, accounts that are 30 or more days past due (DPD) on contractual payments of principal and/or interest that have not been captured by the criteria above are considered to have experienced a significant increase in credit risk. For less material portfolios, which are modelled based on a roll-rate or loss-rate approach, SICR is primarily assessed through the 30 DPD trigger.

Expert credit judgement may be applied in assessing SICR to the extent that certain risks may not have been captured by the models or through the above criteria. Such instances are expected to be rare, for example due to events and material uncertainties arising close to the reporting date.

Assessment of credit-impaired financial assets

WRB clients

The core components in determining credit-impaired ECL provisions are the value of gross charge-off and recoveries. Gross charge-off and/or loss provisions are recognised when it is established that the account is unlikely to pay through the normal process. Recovery of unsecured debt post credit impairment is recognised based on actual cash collected, either directly from clients or through the sale of defaulted loans to third-party institutions. Release of credit impairment provisions for secured loans is recognised if the loan outstanding is paid in full (release of full provision), or the provision is higher than the loan outstanding (release of the excess provision).

CIB and Private Banking clients

Credit-impaired accounts are managed by the Group's specialist recovery unit, Stressed Asset Group (SAG), which is independent of the Client Coverage/Relationship Managers. Where a portion of exposure is considered not recoverable, a stage 3 credit impairment provision is raised. This stage 3 provision is the difference between the loan-carrying amount and the probability-weighted present value of estimated future cash flows, reflecting a range of scenarios (typically the 'upside', 'downside' and 'likely' recovery outcomes). Where the exposure is secured by collateral, the values used will incorporate the impact of forward-looking economic information on the value recoverable collateral and time to realise the same.

The individual circumstances of each client are considered when SAG estimates future cashflows and the timing of future recoveries which involves significant judgement. All available sources, such as cashflow arising from operations, selling assets or subsidiaries, realising collateral or payments under guarantees, are considered. In any decision relating to the raising of provisions, the Group attempts to balance economic conditions, local knowledge and experience, and the results of independent asset reviews. The individual impairment provisions (viz. those not directly from a model) are approved by Stressed Assets Risk (SAR) who are in the Second Line of Defence.

Write-offs

Where it is considered that there is no realistic prospect of recovering a portion of an exposure against which an impairment provision has been raised, that amount will be written off.

Governance of PMAs and application of expert credit judgement in respect of ECL

The Group's Credit Policy and Standards framework details the requirements for continuous monitoring to identify any changes in credit quality and resultant ratings, as well as ensuring a consistent approach to monitoring, managing and mitigating credit risks. The framework aligns with the governance of ECL estimation through the early recognition of significant deteriorations in ratings which drive stage 2 and 3 ECL.

The models used in determining ECL are reviewed and approved by the Group Credit Model Assessment Committee (CMAC) or Delegate Model Approver (DMA), which is appointed by the Model Risk Committee. CMAC has the responsibility to assess and approve the use of models and to review all IFRS 9 interpretations related to models. CMAC also provides oversight on operational matters related to model development, performance monitoring and model validation activities, including standards and regulatory matters.

Prior to submission to CMAC for approval, the models are validated by GMV, a function which is independent of the business and the model developers. GMV's analysis comprises review of model documentation, model design and methodology, data validation, review of the model development and calibration process, out-of-sample performance testing, and assessment of compliance review against IFRS 9 rules and internal standards.

Model performance PMAs

The process of PMA identification, calculation and approval are prescribed in the Credit Risk IFRS 9 ECL Model Family Standards, which are approved by the Global Head, Model Risk Management. PMA calculations are reviewed by GMV and submitted to CMAC for approval and will be removed when the estimates return to being within the monitoring thresholds or validation standards. The level of PMAs and remediation plans are regularly tracked at CMAC.

Judgemental adjustments

These comprise judgemental PMAs and judgemental management overlays, and account for events that are not captured in the Base Case Forecast or the resulting ECL calculated by the models. Judgemental adjustments must be approved by the IIC having considered the nature of the event, why the risk is not captured in the model, and the basis on which the quantum of the overlay has been calculated. Judgemental adjustments are subject to quarterly review and re-approval by the IIC, and will be released when the risks are no longer relevant.

The IFRS 9 Impairment Committee:

- oversees the appropriateness of all Business Model Assessment and Solely Payments of Principal and Interest (SPPI) tests
- reviews and approves ECL for financial assets classified as stages 1, 2 and 3 for each financial reporting period
- reviews and approves stage allocation rules and thresholds
- approves material adjustments in relation to ECL for fair value through other comprehensive income (FVOCI) and amortised cost financial assets
- reviews, challenges and approves base macroeconomic forecasts and the multiple macroeconomic scenarios approach that are utilised in the forward-looking ECL calculations

The IIC consists of senior representatives from Risk and Finance. It meets at least twice every quarter – once before the models are run to approve key inputs into the calculation, and once after the models are run to approve the ECL provisions and any judgemental management overlays that may be necessary.

The IIC is supported by an Expert Panel which also reviews and challenges the base case projections and multiple macroeconomic scenarios. The Expert Panel consists of members of Enterprise Risk Management (which includes the Scenario Design team), Finance, Group Economic Research and country representatives of major jurisdictions.

Traded Risk

Market Risk (audited)

Market Risk is the potential for fair value loss due to adverse moves in financial markets. The Group's exposure to Market Risk arises predominantly from the following sources:

- Trading book:
 - The Group provides clients with access to markets, facilitation of which entails the Group taking moderate Market Risk positions. All trading teams support client activity. There are no proprietary trading teams. Hence, income earned from Market Risk-related activities is primarily driven by the volume of client activity.
- Non-trading book:
 - Treasury is required to hold a liquid assets buffer, much of which is held in high-quality marketable debt securities
 - The Group underwrites and sells down loans, and invests in select investment grade debt securities with no trading intent
 - The Group has capital invested and related income streams denominated in currencies other than US dollars. To the extent that these income streams are not hedged, the Group is subject to Structural Foreign Exchange Risk which is reflected in reserves.

A summary of our current policies and practices regarding Market Risk management is provided in the 'Principal Risks' section (page 202).

The primary categories of Market Risk for the Group are:

- Interest Rate Risk: arising from changes in yield curves and implied volatilities
- Foreign Exchange Risk: arising from changes in currency exchange rates and implied volatilities
- Commodity Risk: arising from changes in commodity prices and implied volatilities
- Credit Spread Risk: arising from changes in the price of debt instruments and credit-linked derivatives and driven by factors other than the level of risk-free interest rates
- Equity Risk: arising from changes in the prices of equities and implied volatilities

Market Risk movements (audited)

Value at Risk (VaR) allows the Group to manage Market Risk across the trading book and most of the fair valued non-trading books.

The average level of total trading and non-trading VaR in 2024 was \$41.8 million, 22 per cent lower than 2023 (\$53.3 million). The year end level of total trading and non-trading VaR in 2024 was \$43.3 million, 3 per cent lower than 2023 (\$44.5 million), due to a reduction in market volatility.

For the trading book, the average level of VaR in 2024 was \$21.1 million, 2 per cent lower than in 2023 (\$21.5 million). Trading activities have remained relatively unchanged, and client driven.

Daily Value at Risk (VaR at 97.5%, one day) (audited)

	2024				2023			
	Average \$million	High \$million	Low \$million	Year end \$million	Average \$million	High \$million	Low \$million	Year end \$million
Trading¹ and non-trading²								
Interest Rate Risk	32.8	43.9	18.6	38.8	39.5	54.1	23.2	30.5
Credit Spread Risk	20.4	31.3	12.8	16.6	33.8	48.0	25.0	31.7
Foreign Exchange Risk	9.2	15.0	5.0	7.4	7.0	12.2	4.2	7.4
Commodity Risk	5.3	10.0	2.9	4.6	5.8	9.7	3.7	4.3
Equity Risk	0.4	0.9	–	–	0.1	0.4	–	–
Diversification effect ³	(26.3)	NA	NA	(24.1)	(32.9)	NA	NA	(29.4)
Total	41.8	53.1	29.4	43.3	53.3	65.5	44.2	44.5
	2024				2023			
	Average \$million	High \$million	Low \$million	Year end \$million	Average \$million	High \$million	Low \$million	Year end \$million
Trading¹								
Interest Rate Risk	12.7	22.0	7.0	12.0	13.1	20.4	7.7	11.6
Credit Spread Risk	6.6	9.6	4.8	5.4	9.4	12.4	7.4	9.4
Foreign Exchange Risk	9.2	15.0	5.0	7.4	7.0	12.2	4.2	7.4
Commodity Risk	4.8	10.0	2.4	4.3	5.8	9.7	3.7	4.4
Equity Risk	–	–	–	–	–	–	–	–
Diversification effect ³	(12.2)	NA	NA	(8.3)	(13.8)	NA	NA	(11.5)
Total	21.1	33.1	13.0	20.8	21.5	30.6	14.7	21.3
	2024				2023			
	Average \$million	High \$million	Low \$million	Year end \$million	Average \$million	High \$million	Low \$million	Year end \$million
Non-trading²								
Interest Rate Risk	28.0	35.5	17.4	32.5	34.2	43.6	19.7	23.9
Credit Spread Risk	17.2	24.8	10.0	15.7	28.3	40.1	21.5	24.4
Foreign Exchange Risk	–	–	–	–	–	–	–	–
Commodity Risk	1.3	1.8	0.6	0.8	0.1	0.5	0.3	0.5
Equity Risk	0.4	0.9	–	–	0.1	0.4	–	–
Diversification effect ³	(12.7)	NA	NA	(10.2)	(18.7)	NA	NA	(13.2)
Total	34.2	44.3	28.6	38.8	44.0	53.4	32.0	35.6

The following table sets out how trading and non-trading VaR is distributed across the Group's businesses:

	2024				2023			
	Average \$million	High \$million	Low \$million	Year end \$million	Average \$million	High \$million	Low \$million	Year end \$million
Trading¹ and non-trading²	41.8	53.1	29.4	43.3	53.3	65.5	44.2	44.5
Trading¹								
Macro Trading ⁴	17.0	29.9	10.0	17.1	13.8	20.2	9.2	15.4
Global Credit	6.8	11.1	4.3	5.8	12.8	18.2	8.5	10.1
XVA	3.3	4.4	2.4	2.4	4.8	7.0	3.4	4.5
Diversification effect ³	(6.0)	NA	NA	(4.5)	(9.9)	NA	NA	(8.7)
Total	21.1	33.1	13.0	20.8	21.5	30.6	14.7	21.3
Non-trading²								
Treasury	32.9	40.8	26.9	38.6	43.4	50.2	31.1	34.9
Global Credit	5.0	13.4	2.4	8.8	3.9	13.6	2.0	4.0
Listed Private Equity	0.4	0.9	–	–	0.1	0.4	–	–
Diversification effect ³	(4.1)	NA	NA	(8.6)	(3.4)	NA	NA	(3.3)
Total	34.2	43.3	28.6	38.8	44.0	53.4	32.0	35.6

1 The trading book for Market Risk is defined in accordance with the UK onshore Capital Requirements Regulation Part 3 Title I Chapter 3, which restricts the positions permitted in the trading book

2 The non-trading book VaR does not include the loan underwriting business

3 The total VaR is non-additive across risk types due to diversification effects, which is measured as the difference between the sum of the VaR by individual risk type or business and the combined total VaR. As the maximum and minimum occur on different days for different risk types or businesses, it is not meaningful to calculate a portfolio diversification benefit for these measures

4 Macro Trading comprises the Rates, FX and Commodities businesses

Risks not in VaR

In 2024, the main market risks not reflected in VaR were:

- basis risks for which the historical market price data is limited and is therefore proxied, giving rise to potential proxy basis risk that is not captured in VaR
- potential depeg risk from currencies currently pegged or managed, where the historical one-year VaR observation period may not reflect the possibility of a change in the currency regime or a sudden depegging
- potential understatement of VaR when abrupt increases in market volatility are not adequately captured by the VaR model.

Additional capital is set aside to cover such 'risks not in VaR'.

Backtesting

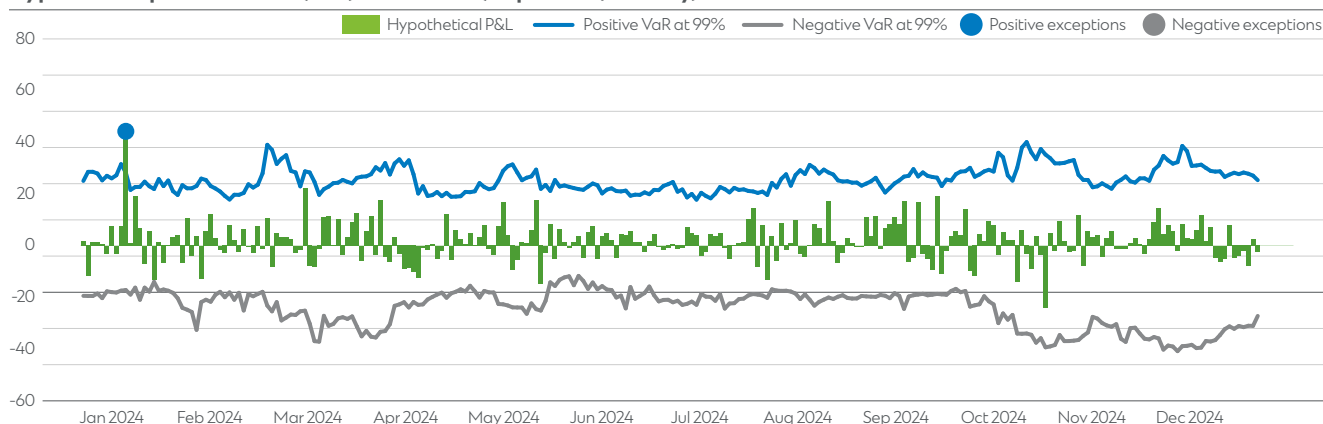
In 2024, there were no regulatory backtesting negative exceptions at Group level (in 2023 there were five).

An enhancement to the VaR model will be implemented from January 2025 to increase the model's responsiveness to abrupt upturns in market volatility.

The graph below illustrates the performance of the VaR model used in capital calculations. It compares the 99 percentile profit and loss confidence level given by the VaR model with the hypothetical profit and loss of each day given the actual market movement ignoring any intra-day trading activity.

2024 Backtesting chart

Internal model approach regulatory trading book at Group level
Hypothetical profit and loss (P&L) versus VaR (99 per cent, one day)



Trading loss days

	2024	2023
Number of loss days reported for Markets trading book total product income ¹	12	16

1 Includes credit valuation adjustment (CVA) and funding valuation adjustment (FVA), and excludes Treasury business (non-trading), periodic valuation changes for Capital Markets, expected loss provisions, overnight indexed swap (OIS) discounting and accounting adjustments such as debit valuation adjustments

Average daily income earned from Market Risk-related activities¹ (audited)

Trading: The average level of total trading daily income in 2024 was \$13.3 million, 10.8 per cent higher than 2023 (\$12 million). The increase is largely attributable higher client demand for derivative products across Greater China and North Asia coupled with larger holdings of government and corporate bonds in anticipation of increased demand by clients.

Non-trading: The average level of total non-trading daily income in 2024 was \$2.7 million, attributable to translation gains on the revaluation of FX positions in Egypt, and FX revaluation gains across currencies in the Markets Credit Trading business.

	2024 \$million	2023 \$million
Trading		
Interest Rate Risk	5.2	4.5
Credit Spread Risk	1.7	1.2
Foreign Exchange Risk	5.6	5.5
Commodity Risk	0.8	0.8
Equity Risk	–	–
Total	13.3	12.0
Non-trading		
Interest Rate Risk	0.6	(0.1)
Credit Spread Risk	2.1	(0.7)
Equity Risk	–	0.1
Total	2.7	(0.7)

¹ Reflects total product income which is the sum of client income and own account income. Includes elements of trading income, interest income and non funded income which are generated from Market Risk-related activities. Rates, XVA and Treasury income are included under Interest Rate Risk while Credit Trading income is included under Credit Spread Risk

Structural foreign exchange exposures

The table below sets out the principal structural foreign exchange exposures (net of investment hedges) of the Group.

	2024 \$million	2023 \$million
Hong Kong dollar	4,232	4,662
Renminbi	3,593	3,523
Indian rupee	3,480	3,309
Singapore dollar	3,306	2,415
Malaysian ringgit	1,539	1,540
Korean won	1,363	2,114
Bangladeshi taka	1,113	1,007
Euro	1,112	1,125
Taiwanese dollar	1,087	1,222
UAE dirham	807	709
Thai baht	763	782
Pakistani rupee	392	306
Indonesian rupiah	230	293
Other	3,407	3,206
	26,424	26,213

As at 31 December 2024, the Group had taken net investment hedges using derivative financial instruments to partly cover its exposure to the Hong Kong dollar of \$5,359 million (31 December 2023: \$5,603 million), Korean won of \$3,048 million (31 December 2023: \$2,884 million), Indian rupee of \$1,784 million (31 December 2023: \$1,809 million), Renminbi of \$1,640 million (31 December 2023: \$1,516 million), UAE dirham of \$1,470 million (31 December 2023: \$1,470 million), Taiwanese dollar of \$1,092 million (31 December 2023: \$1,025 million), Singapore dollar of \$0 million (2023: \$1,047 million) and South African rand of \$0 million (31 December 2023: \$64 million). An analysis has been performed on these exposures to assess the impact of a 1 per cent fall in the US dollar exchange rates, adjusted to incorporate the impacts of correlations of these currencies to the US dollar. The impact on the positions above would be an increase of \$262 million (31 December 2023: \$260 million). Changes in the valuation of these positions are taken to reserves. For analysis of the Group's capital position and requirements, refer to the 'Capital review' section (page 270).

Counterparty Credit Risk

Counterparty Credit Risk is the potential for loss in the event of the default of a derivative counterparty, after taking into account the value of eligible collaterals and risk mitigation techniques. The Group's counterparty credit exposures are included in the Credit Risk section.

Derivative financial instruments Credit Risk mitigation

The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions.

In addition, the Group enters into credit support annexes (CSAs) with counterparties where collateral is deemed a necessary or desirable mitigant to the exposure. Cash collateral includes collateral called under a variation margin process from counterparties if total uncollateralised mark-to-market exposure exceeds the threshold and minimum transfer amount specified in the CSA. With certain counterparties, the CSA is reciprocal and requires us to post collateral if the overall mark-to-market values of positions are in the counterparty's favour and exceed an agreed threshold.

Liquidity and Funding Risk

Liquidity and Funding Risk is the risk that the Group may not have sufficient stable or diverse sources of funding to meet its obligations as they fall due.

The Group's Liquidity and Funding Risk framework requires each country to ensure that it operates within predefined liquidity limits and remains in compliance with Group liquidity policies and practices, as well as local regulatory requirements.

The Group achieves this through a combination of setting Risk Appetite and associated limits, policy formation, risk measurement and monitoring, prudential and internal stress testing, governance and review.

Throughout 2024, the Group retained a robust liquidity position across key metrics. The Group continues to focus on improving the quality and diversification of its funding mix and remains committed to supporting its clients.

Primary sources of funding (audited)

The Group's funding strategy is largely driven by its policy to maintain adequate liquidity at all times, in all geographic locations and for all currencies. This is done to ensure the Group can meet all of its obligations as they fall due. The Group's funding profile is therefore well diversified across different sources, maturities and currencies.

The Group's assets are funded predominantly by customer deposits, supplemented with wholesale funding, which is diversified by type and maturity.

The Group maintains access to wholesale funding markets in all major financial centres in which it operates. This seeks to ensure that the Group has market intelligence, maintains stable funding lines and can obtain optimal pricing when performing cashflow management activities.

In 2024, the Group issued approximately \$9.1 billion worth of securities from its holding company, Standard Chartered PLC (2023 \$8.1 billion of senior debt securities). The issuances included \$1.6 billion of Additional Tier 1 securities and \$7.5 billion of senior debt securities across multiple currencies. Over this same period, there were Additional Tier 1 calls of \$0.6 billion, Tier 2 redemptions (calls & maturities) of around \$1.6 billion and senior calls of \$6.3 billion. In the next 12 months, approximately \$7.8 billion of the Group's Additional Tier 1, senior and subordinated debt securities are either falling due for repayment contractually or callable by the Group.

Group's composition of liabilities and equity 31 December 2024



Liquidity and Funding Risk metrics

The Group continually monitors key liquidity metrics, both on a country basis and consolidated across the Group.

The following liquidity and funding Board Risk Appetite metrics define the maximum amount and type of risk that the Group is willing to assume in pursuit of its strategy: liquidity coverage ratio (LCR), liquidity stress survival horizons, recovery capacity and net stable funding ratio (NSFR). In addition to the Board Risk Appetite, there are further limits that apply at Group and country level such as external wholesale borrowing (WBE) and cross currency limits.

Liquidity coverage ratio (LCR)

The LCR is a regulatory requirement set to ensure the Group has sufficient unencumbered high-quality liquid assets to meet its liquidity needs in a 30-calendar-day liquidity stress scenario.

The Group monitors and reports its liquidity positions under the Liquidity Coverage Ratio per PRA rulebook and has maintained its LCR above the prudential requirement. The Group maintained robust liquidity ratios throughout 2024.

At the reporting date, the Group LCR was 138 per cent (31 December 2023: 145 per cent), with a surplus to both Board-approved Risk Appetite and regulatory requirements.

Adequate liquidity was held across our footprint to meet all local prudential LCR requirements where applicable.

The Liquidity buffer reported is after deductions made to reflect the impact of limitations in the transferability of entity liquidity around the Group. This resulted in an adjustment of \$35 billion to LCR HQLA as at 31 December 2024.

	2024 \$million	2023 \$million
Liquidity buffer	170,306	185,643
Total net cash outflows	123,226	128,111
Liquidity coverage ratio	138%	145%

Stressed coverage

The Group intends to maintain a prudent and sustainable funding and liquidity position, in all countries and currencies, such that it can withstand a severe but plausible liquidity stress.

Our approach to managing liquidity and funding is reflected in the Board-level Risk Appetite Statement which includes the following:

“The Group should have sufficient stable and diverse sources of funding to meet its contractual and contingent obligations as they fall due.”

The Group's internal liquidity adequacy assessment process ('ILAAP') stress testing framework covers the following stress scenarios:

- Standard Chartered-specific – Captures the liquidity impact from an idiosyncratic event affecting Standard Chartered only with the rest of the market assumed to be operating normally.
- Market wide – Captures the liquidity impact from a market-wide crisis affecting all participants in a country, region or globally.
- Combined – Assumes both Standard Chartered-specific and Market-wide events affect the Group simultaneously and hence is the most severe scenario.

All scenarios include, but are not limited to, modelled outflows for retail and wholesale funding, off-balance sheet funding risk, cross-currency funding risk, intraday risk, franchise risk and risks associated with a deterioration of a firm's credit rating. Concentration risk approach captures single name and industry concentration.

ILAAP stress testing results show that, as at 31 December 2024, Group and all countries were able to survive for a period of time with positive surpluses as defined under each scenario. The results take into account currency convertibility and portability constraints while calculating the liquidity surplus at Group level.

Standard Chartered Bank's credit ratings as at 31 December 2024 were A+ with stable outlook (Fitch), A+ with stable outlook (S&P) and A1 with positive outlook (Moody's). As of 31 December 2024, the estimated contractual outflow of a three-notch long-term ratings downgrade is \$1.0 billion.

External wholesale borrowing

A risk trigger is set to prevent excessive reliance on wholesale borrowing. Within the definition of wholesale borrowing, triggers are applied to all branches and operating subsidiaries in the Group.

Advances-to-deposits ratio

This is defined as the ratio of total loans and advances to customers relative to total customer deposits. An advances-to-deposits ratio below 100 per cent demonstrates that customer deposits exceed customer loans as a result of the emphasis placed on generating a high level of funding from customers.

The Group's advances-to-deposits ratio has remained stable in 2024 at 53.3 per cent. Deposits from customers as at 31 December 2024 are \$486,261 million (31 December 2023: \$486,666 million).

	2024 \$million	2023 \$million
Total loans and advances to customers ^{1,2}	259,269	259,481
Total customer accounts ³	486,261	486,666
Advances-to-deposits ratio	53.3%	53.3%

1 Excludes reverse repurchase agreement and other similar secured lending of \$9,660 million and includes loans and advances to customers held at fair value through profit and loss of \$7,084 million

2 Loans and advances to customers for the purpose of the advances-to-deposits ratio excludes \$19,187 million of approved balances held with central banks, confirmed as repayable at the point of stress (31 December 2023: \$20,710 million)

3 Includes customer accounts held at fair value through profit or loss of \$21,772 million (31 December 2023: \$17,248 million)

Net stable funding ratio (NSFR)

The NSFR is a PRA regulatory requirement that stipulates institutions to maintain a stable funding profile in relation to an assumed duration of their assets and off-balance sheet activities over a one-year horizon. It is the ratio between the amount of available stable funding (ASF) and the amount of required stable funding (RSF). ASF factors are applied to

balance sheet liabilities and capital, based on their perceived stability and the amount of stable funding they provide. Likewise, RSF factors are applied to assets and off-balance sheet exposures according to the amount of stable funding they require. The regulatory requirements for NSFR are to maintain a ratio of at least 100 per cent. The average ratio for the past four quarters is 135 per cent.

Liquidity pool

The liquidity value of the Group's LCR eligible liquidity pool at the reporting date was \$170 billion. The figures in the table below account for haircuts, currency convertibility and portability constraints per PRA rules for transfer restrictions (amounting to \$35 billion as at 31 December 2024), and therefore are not directly comparable with the consolidated balance sheet. A liquidity pool is held to offset stress outflows as defined in the LCR per PRA rulebook.

	2024 \$million	2023 \$million
Level 1 securities		
Cash and balances at central banks	76,094	81,675
Central banks, governments /public sector entities	74,182	71,768
Multilateral development banks and international organisations	14,386	16,917
Other	343	1,291
Total Level 1 securities	165,005	171,651
Level 2 A securities	4,367	13,268
Level 2 B securities	934	724
Total LCR eligible assets	170,306	185,643

Liquidity analysis of the Group's balance sheet (audited)**Contractual maturity of assets and liabilities**

The following table presents assets and liabilities by maturity groupings based on the remaining period to the contractual maturity date as at the balance sheet date on a discounted basis. Contractual maturities do not necessarily reflect actual repayments or cashflows.

Within the tables below, cash and balances with central banks, interbank placements and investment securities that are fair valued through other comprehensive income are used by the Group principally for liquidity management purposes.

As at the reporting date, assets remain predominantly short-dated, with 59 per cent maturing in less than one year.

	2024								
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Assets									
Cash and balances at central banks	55,646	–	–	–	–	–	–	7,801	63,447
Derivative financial instruments	22,939	15,556	12,217	7,265	4,328	7,067	7,448	4,652	81,472
Loans and advances to banks ^{1,2}	22,381	21,722	10,588	6,771	4,986	8,407	3,715	1,990	80,560
Loans and advances to customers ^{1,2}	65,688	58,765	25,739	15,479	16,192	31,240	31,766	94,688	339,557
Investment securities ¹	13,016	25,886	21,546	14,789	14,688	32,815	41,423	62,418	226,581
Other assets ¹	12,601	32,130	1,333	381	931	71	64	10,560	58,071
Total assets	192,271	154,059	71,423	44,685	41,125	79,600	84,416	182,109	849,688
Liabilities									
Deposits by banks ^{1,3}	24,293	2,345	1,621	848	571	4,342	1,939	3	35,962
Customer accounts ^{1,4}	379,926	37,502	25,863	10,152	10,123	9,695	47,367	2,635	523,263
Derivative financial instruments	21,680	17,115	11,773	7,018	4,353	6,660	8,144	5,321	82,064
Senior debt ⁵	609	1,755	4,074	2,132	932	7,926	18,784	17,886	54,098
Other debt securities in issue ¹	2,734	2,663	6,550	4,535	5,015	851	1,206	688	24,242
Other liabilities	12,173	43,574	3,020	1,441	155	4,494	682	2,854	68,393
Subordinated liabilities and other borrowed funds	–	64	23	180	13	359	1,978	7,765	10,382
Total liabilities	441,415	105,018	52,924	26,306	21,162	34,327	80,100	37,152	798,404
Net liquidity gap	(249,144)	49,041	18,499	18,379	19,963	45,273	4,316	144,957	51,284

2023

Assets									
Cash and balances at central banks	63,752	–	–	–	–	–	–	6,153	69,905
Derivative financial instruments	12,269	10,632	6,910	3,611	2,921	4,650	6,038	3,403	50,434
Loans and advances to banks ^{1,2}	28,814	23,384	10,086	4,929	5,504	1,583	2,392	1,098	77,790
Loans and advances to customers ^{1,2}	86,695	55,009	25,492	15,392	14,537	25,987	26,545	95,829	345,486
Investment securities ¹	12,187	28,999	17,131	18,993	20,590	24,244	44,835	50,168	217,147
Other assets ¹	17,611	31,729	1,286	409	587	67	93	10,300	62,082
Total assets	221,328	149,753	60,905	43,334	44,139	56,531	79,903	166,951	822,844
Liabilities									
Deposits by banks ^{1,3}	26,745	1,909	1,398	503	778	1,326	2,848	2	35,509
Customer accounts ^{1,4}	384,444	47,723	28,288	13,647	11,806	7,787	38,578	2,349	534,622
Derivative financial instruments	13,111	12,472	6,655	4,001	3,433	5,142	6,932	4,315	56,061
Senior debt ⁵	130	1,111	1,537	1,389	624	11,507	20,127	14,443	50,868
Other debt securities in issue ¹	3,123	5,822	6,109	3,235	3,037	492	482	195	22,495
Other liabilities	14,929	26,447	1,695	544	883	1,830	1,809	12,763	60,900
Subordinated liabilities and other borrowed funds	980	68	19	172	453	312	1,936	8,096	12,036
Total liabilities	443,462	95,552	45,701	23,491	21,014	28,396	72,712	42,163	772,491
Net liquidity gap	(222,134)	54,201	15,204	19,843	23,125	28,135	7,191	124,788	50,353

1 Loans and advances, investment securities, deposits by banks, customer accounts and debt securities in issue include financial instruments held at fair value through profit or loss, see Note 13 Financial instruments

2 Loans and advances include reverse repurchase agreements and other similar secured lending of \$98.8 billion (31 December 2023: \$97.6 billion)

3 Deposits by banks include repurchase agreements and other similar secured borrowing of \$8.7 billion (31 December 2023: \$5.6 billion)

4 Customer accounts include repurchase agreements and other similar secured borrowing of \$37.0 billion (31 December 2023: \$48.0 billion)

5 Senior debt maturity profiles are based upon contractual maturity, which may be later than call options over the debt held by the Group

Behavioural maturity of financial assets and liabilities

The cashflows presented in the previous section reflect the cashflows that will be contractually payable over the residual maturity of the instruments. However, contractual maturities do not necessarily reflect the timing of actual repayments or cashflow. In practice, certain assets and liabilities behave differently from their contractual terms, especially for short-term customer accounts, credit card balances and overdrafts, which extend to a longer period than their contractual maturity. On the other hand, mortgage balances tend to have a shorter repayment period than their contractual maturity date. Expected customer behaviour is assessed and managed on a country basis using qualitative and quantitative techniques, including analysis of observed customer behaviour over time.

Maturity of financial liabilities on an undiscounted basis (audited)

The following table analyses the contractual cashflows payable for the Group's financial liabilities by remaining contractual maturities on an undiscounted basis. The financial liability balances in the table below will not agree with the balances reported in the consolidated balance sheet as the table incorporates all contractual cashflows, on an undiscounted basis, relating to both principal and interest payments. Derivatives not treated as hedging derivatives are included in the 'On demand' time bucket and not by contractual maturity.

Within the 'More than five years and undated' maturity band are undated financial liabilities, the majority of which relate to subordinated debt, on which interest payments are not included as this information would not be meaningful, given the instruments are undated. Interest payments on these instruments are included within the relevant maturities up to five years.

	2024								Total \$million
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	
Deposits by banks	24,303	2,360	1,660	862	589	4,347	1,939	4	36,064
Customer accounts	380,377	37,790	26,277	10,384	10,438	9,937	47,642	3,396	526,241
Derivative financial instruments ¹	80,055	13	12	10	3	216	592	1,163	82,064
Debt securities in issue	3,622	4,551	11,007	7,056	6,319	10,261	23,184	21,337	87,337
Subordinated liabilities and other borrowed funds	19	134	46	206	14	392	2,345	13,800	16,956
Other liabilities	10,421	44,933	2,894	1,408	152	4,433	682	4,802	69,725
Total liabilities	498,797	89,781	41,896	19,926	17,515	29,586	76,384	44,502	818,387

	2023								Total \$million
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	
Deposits by banks	26,759	1,921	1,417	513	790	1,328	2,848	4	35,580
Customer accounts	385,361	48,140	28,763	14,049	12,190	8,118	39,000	3,036	538,657
Derivative financial instruments ¹	53,054	517	46	44	103	202	887	1,208	56,061
Debt securities in issue	3,507	6,995	8,015	5,070	4,002	13,663	23,413	16,396	81,061
Subordinated liabilities and other borrowed funds	1,043	134	46	208	570	395	2,389	14,367	19,152
Other liabilities	12,200	26,291	1,560	515	884	1,832	1,810	11,513	56,605
Total liabilities	481,924	83,998	39,847	20,399	18,539	25,538	70,347	46,524	787,116

1 Derivatives are on a discounted basis

Interest Rate Risk in the Banking Book

The following table provides the estimated impact to a hypothetical base case projection of the Group's earnings under the following scenarios:

- A 50 basis point parallel interest rate shock (up and down) to the current market-implied path of rates, across all yield curves
- A 100 basis point parallel interest rate shock (up and down) to the current market-implied path of rates, across all yield curves

These interest rate shock scenarios assume all other economic variables remain constant. The sensitivities shown represent the estimated change to a hypothetical base case projected net interest income (NII), plus the change in interest rate implied income and expense from FX swaps used to manage banking book currency positions, under the different interest rate shock scenarios.

The base case projected NII is based on the current market-implied path of rates and forward rate expectations. The NII sensitivities below stress this base case by a further 50 or 100bps. Actual observed interest rate changes will likely differ from market expectation. Accordingly, the shocked NII sensitivity does not represent a forecast of the Group's net interest income.

Estimated one-year impact to earnings from a parallel shift in yield curves at the beginning of the period of:

	2024								
	USD bloc \$million	HKD bloc \$million	SGD bloc \$million	KRW bloc \$million	CNY bloc \$million	INR bloc \$million	EUR bloc \$million	Other currency bloc ¹ \$million	Total \$million
+ 50 basis points	20	30	10	20	20	30	10	70	210
- 50 basis points	(40)	(30)	(20)	(20)	(30)	(30)	(20)	(80)	(270)
+ 100 basis points	30	60	20	30	30	40	30	150	390
- 100 basis points	(90)	(50)	(40)	(50)	(50)	(40)	(40)	(190)	(550)

Estimated one-year impact to earnings from a parallel shift in yield curves at the beginning of the period of:

	2023								
	USD bloc \$million	HKD bloc \$million	SGD bloc \$million	KRW bloc \$million	CNY bloc \$million	INR bloc \$million	EUR bloc \$million	Other currency bloc ¹ \$million	Total \$million
+ 50 basis points	90	10	50	10	30	20	30	110	350
- 50 basis points	(150)	(30)	(50)	(20)	(40)	(30)	(30)	(120)	(470)
+ 100 basis points	180	10	100	20	60	40	50	230	690
- 100 basis points	(280)	(40)	(100)	(40)	(80)	(60)	(60)	(230)	(890)

¹ The largest exposures within the Other currency bloc are GBP, JPY, MYR, TWD

As at 31 December 2024, the Group estimates the one-year impact of an instantaneous, parallel increase across all yield curves of 50 basis points to increase projected NII by \$210 million. The equivalent impact from a parallel decrease of 50 basis points would result in a reduction in projected NII of \$270 million. The Group estimates the one-year impact of an instantaneous, parallel increase across all yield curves of 100 basis points to increase projected NII by \$390 million. The equivalent impact from a parallel decrease of 100 basis points would result in a reduction in projected NII of \$550 million.

The interest rate sensitivities are indicative stress tests and based on simplified scenarios, estimating the aggregate impact of an unanticipated, instantaneous parallel shock across all yield curves over a one-year horizon, including the time taken to implement changes to pricing before becoming effective. The assessment assumes that the size and mix of the balance sheet remain constant and that there are no specific management actions in response to the change in rates. No assumptions are made in relation to the impact on credit spreads in a changing rate environment.

Significant modelling and behavioural assumptions are made regarding scenario simplification, market competition, pass-through rates, asset and liability re-pricing tenors, and price flooring. In particular, the assumption that interest rates of all currencies and maturities shift by the same amount concurrently, and that no actions are taken to mitigate the impacts arising from this are considered unlikely. Reported sensitivities will vary over time due to a number of factors including changes in balance sheet composition, market conditions, customer behaviour and risk management strategy. Therefore, while the NII sensitivities are a relevant measure of the Group's interest rate exposure, they should not be considered an income or profit forecast.

The benefit from rising interest rates is primarily from reinvesting at higher yields and from assets re-pricing faster and to a greater extent than deposits. NII sensitivity in falling rate scenarios has decreased versus 31 December 2023, due to an increase in programmatic hedging as well as actions taken in discretionary portfolios to increase asset duration.

Over the course of 2024 the notional of interest rate swaps and HTC-accounted bond portfolios used to reduce NII sensitivity through the cycle increased from \$47 billion to \$64 billion. As at December 2024, the portfolios had a weighted average maturity of 3.0 years, which reflects the behaviouralised lives of the rate-insensitive deposit and equity balances that they hedge, and a yield of 3.5 per cent.

Operational and Technology Risk

Operational and Technology Risk profile

The implementation of standardised non-financial risk, control and causal taxonomies is enabling improved risk aggregation and reporting, and has provided opportunities for simplifying the process for risk identification and assessment in the Group.

Operational and Technology Risk is elevated in areas such as Change Mismanagement Risk and Third-Party Risk Management, which are subject to ongoing control enhancement programmes. Other key areas of focus are Systems Health/Technology risk, Operational Resilience and Regulatory Compliance. To address these areas, the Group has focused on improving the sustainable operating environment and has initiated several programmes to enhance the control environment. The Group continues to monitor and manage Operational and Technology risks

associated with the external environment such as geopolitical factors, the increasing risk of cyber-attacks and inappropriate use of Artificial Intelligence. This enables the Group to keep pace with the new business developments, while ensuring that its risk and control frameworks evolve accordingly. The Group continues to strengthen its risk management to understand the full spectrum of risks in the operating environment, enhance its defences and improve resilience.

Operational and Technology risk events and losses

Operational losses are one indicator of the effectiveness and robustness of our non-financial risk and control environment.

The Group's profile of operational loss events in 2024 and 2023 is summarised in the table below, which shows the distribution of gross operational losses by Basel business line. There has been a sharp increase in Corporate Items in 2024 due to a single large event pertaining to Finance Accounting Adjustment.

Distribution of Operational losses by Basel business line	% Loss	
	2024	2023 ¹
Agency Services	0.0%	3.9%
Asset Management	0.0%	0.2%
Commercial Banking	1.4%	8.0%
Corporate Finance	0.1%	7.2%
Corporate Items	72.5%	34.3%
Payment and Settlements	7.6%	16.6%
Retail Banking	17.0%	21.3%
Retail Brokerage	0.0%	0.0%
Trading and Sales	1.4%	8.6%

¹ Losses in 2023 have been restated to include incremental events recognised in 2024

The Group's profile of operational loss events in 2024 and 2023 is also summarised by Basel event type in the table below. It shows the distribution of gross operational losses by Basel event type.

Distribution of Operational losses by Basel event type	% Loss	
	2024	2023 ¹
Business disruption and system failures	1.8%	4.7%
Clients products and business practices	14.1%	2.9%
Damage to physical assets	0.0%	0.0%
Employment practices and workplace safety	0.1%	0.6%
Execution delivery and process management	81.5%	77.3%
External fraud	2.4%	14.4%
Internal fraud	0.1%	0.2%

¹ Losses in 2023 have been restated to include incremental events recognised in 2024

Other principal risks

The losses arising from operational failures for other principal and integrated risks are reported as operational losses. Operational losses do not include operational risk-related credit impairments.

Climate Risk

Disclaimer

For the avoidance of doubt, this Climate Risk section is subject to the statements included in (i) the 'Forward- Looking Statements' section; and (ii) the 'Basis of Preparation and Caution Regarding Data Limitations' section provided under 'Important Notices' at page 397.

Managing Climate Risk

Environmental, Social and Governance and Reputational (ESGR) Risk is defined as the risk of potential or actual adverse impact on the environment and/or society, or to the Group's financial performance, operations or name, brand or standing, arising from environmental, social or governance factors, or as a result of the Group's actual or perceived actions or inactions. ESGR Risk continues to be an area of growing importance, driving a need for strategic transformation across business activities and risk management.

An environmental (such as climate), social or governance event, or change in condition, if it occurs, could result in actual or potential financial loss or non-financial detriments to the Group. As such, Climate Risk is identified as a material risk for the Group, which is integrated across relevant Principal Risk Types (PRTs) and is managed via the ESGR Risk Type Framework. The Group is exposed to climate risk through our clients, own operations, vendors, suppliers and from the industries and markets we operate in.

Climate Risk Taxonomy

Climate Risk	The potential for financial loss and non-financial detriments arising from climate change and society's response to it.
Physical Risk	Risks arising from increasing severity and frequency of climate and weather-related events, which can damage property and other infrastructure, disrupt supply chains, and impact food production. Additionally, they may lead to declining assets valuations and challenges with insurance claims, resulting in greater financial losses. Indirect effects on the macroeconomic environment, such as lower output and productivity, may exacerbate these direct impacts.
Acute	Specific event-driven weather events, including increased severity of extreme weather events, such as cyclones, hurricanes, floods, or wildfires.
Chronic	Longer-term shifts in climate patterns, such as changing precipitation patterns, sea-level rise, and longer-term drought.
Transition Risk	Risk arising from the adjustment towards a carbon-neutral economy, which will require significant structural changes to the economy. These changes will prompt a reassessment of a wide range of asset values, a change in energy prices, and a fall in income and creditworthiness of some borrowers. In turn, this leads to credit losses for lenders and market losses for investors.

The Board committees consider climate-related risks and opportunities when reviewing and guiding strategic decisions. Board-level oversight is exercised through the Board Risk Committee (BRC), and regular climate risk updates are provided to the Board and BRC. At an executive level, the Group Risk Committee has appointed the Climate Risk Management Committee (CRMC), consisting of senior representatives from business, risk, and other functions such as Internal Audit, which oversees Climate Risk including the implementation of Climate Risk workplan and progress made by the Group in meeting regulatory requirements.

Key financial regulators across our footprint have proposed or set supervisory expectations on climate and environmental risk management. Those expectations are broadly aligned with the Basel Committee principles for the management of climate-related financial risks, but local implementations vary.

We actively engage with industry bodies and regulators to seek consistency in policy making across our markets. Climate Risk-related regulatory developments and obligations set by both financial and non-financial service regulators are tracked at Group and country level, with roles and responsibilities set out in the Group's ESGR Risk Policy.

Key regulatory trends we observe include:

- **Disclosures:** Elevated volume of proposals, updates or new climate and sustainability-related disclosure requirements across the markets in which we operate. This is partially driven by the adoption and implementation of International Sustainability Standards Board and European Sustainability Reporting Standards.
- **Risk management:** Regulators continued to drive the integration of Climate Risk into day-to-day business/ operations for regulated financial institutions, moving their focus towards stress testing and scenario analysis. Regulators have also started to look at the transition planning process in some markets.
- **Taxonomies and product-related standards:** Financial regulators and leading industry bodies continued to report, consult, and set rules and guidelines around sustainable finance product frameworks and reporting. The key concern remains ensuring market integrity and greenwashing prevention.



For more information on the Group's governance approach for climate-related risks and opportunities, see [pages 98 to 102](#).

Climate Risk Appetite metrics

Our Climate Risk Appetite Statement is approved annually by the Board and supported by Board RA metrics and Management Team Limits (MTLs) across impacted risk types. The Board RA metrics are approved by the Board and the MTLs by the Group Risk Committee annually and any breaches of either are reported to the Board Risk Committee and Group Risk Committee.

Group Climate Risk Appetite Statement

"The Group aims to measure and manage financial and non-financial risks arising from climate change, and reduce the emissions related to our own activities and those related to the financing of clients in alignment with the Paris Agreement."

We have cross-cutting Board RA metrics and MTLs across WRB Risk, CIB Risk, Traded Risk, Country Risk and an enterprise-wide metric focusing on the divergence of key sectors (Power, Oil and Gas, Automotive Manufacturing, Steel, Aluminium and Cement) from the Group's net zero pathway.

As part of our annual Risk Appetite review, we continue to focus on evaluating current metrics, tightening limits where necessary and expanding coverage for enhanced risk identification and management. A revised Risk Appetite statement will be in effect from 2025, combining Climate Risk and Reputational and Sustainability Risk for a more comprehensive coverage.

Key Risk Appetite metrics are cascaded to all relevant markets, supported by management information. The country Climate Risk profile is also reviewed at country-level risk committees for all subsidiaries.

Processes for identifying and assessing Climate Risks

Climate Risk is becoming increasingly critical as climate-related events continue to unfold globally, accompanied by rising regulatory expectations. In response, we have entered into strategic partnerships to develop or gain access to various toolkits to quantitatively measure climate-related physical and transition risks. For example, the Climate X Spectra platform delivers location-specific risk ratings, damages and revenue losses for extreme weather events linked to climate change, covering private and listed corporates as well as real estate. The hazard library includes 12 hazard types (e.g. flooding, wildfires, and tropical cyclones) for time horizons until 2100 under the four Representative Concentration Pathway (RCP) and four Shared Socioeconomic Pathways (SSPs) scenarios. Focus for 2025 and beyond will include improving the financial quantification aspects leveraging Climate X data, which will enable enhanced loss estimation from physical risk hazard events. We have worked with our vendors to develop our internal transition risk models. This will be extended to additional sectors and physical risk assessment in 2025 to further reduce our reliance on third-party models.

Internal training programmes to better identify and mitigate risk

In order to effectively embed climate risks across the Group, we have rolled out a comprehensive eight-module role-specific Climate Risk and net zero credit certification. This includes a core module covering climate change science, transition scenarios, Climate Risk Assessments (CRAs) and net zero targets and alignment calculations, and a sector-specific training, focusing on Oil and Gas, Power, Steel, Aluminium, Shipping and Automobile clients. This augments our existing foundational sustainability training which covers climate risk at a basic level. We recognise that various countries have been stepping up their regulatory requirements and monitoring in relation to climate risk. In response to this trend, we continue to provide our senior risk officers in country with dedicated training and working group updates. Periodic training sessions on Climate Risk integration continue to be provided to the first and second line of defence to further strengthen the understanding of Climate Risk and its application within the Group.

Limitations with existing tools and data

We recognise that assessing climate risk has its limitations as quantifying approaches are still evolving:

- Data availability and client coverage continue to pose challenges, especially in emerging markets. With the limited coverage of granular client-level information at both Group and entity level, there is reliance on use of proxies e.g. sector and regional averages, sovereign heatmaps, and credit grade projections and movements.
- Further, most tools and modelling approaches present a gross risk profile that often overlooks existing adaptation measures, as well as government policies to protect and build for changing climate. Assumptions in climate modelling also continue to rely on nascent methodologies which do not factor non-linear shifts and complex feedback loops or the social dimension of climate change.
- Over time, sovereigns and policymakers are expected to drive market trends, such as investment in adaptation plans, technological advancements, innovative risk transfer and mitigation approaches to combat the potential impacts of climate change.

Notwithstanding the above, we have observed an improvement in data coverage since the creation of our Climate Analyst team in the first line of defence and development of internal climate risk models. Additionally, we have created a centralised data store to enable the Group to capture all sustainability-related data for our clients. This includes monitoring of the data quality, in order to reduce the usage of proxies over time. We intend to refine our evaluations and methodologies progressively as the availability and quality of data improves.

The data we have captured through various sources has helped us develop our client-level CRAs for existing and new clients, improve our internal climate modelling capabilities and strengthen the risk measurement and monitoring of our portfolios. Notwithstanding the limitations noted above, we can conclude that the results presented below across the various PRTs provide strategic direction in relation to the risks measured.

Looking ahead

We expect a continuing trend of change in the coming years, including: (i) a greater focus on our Physical Risk measurement capabilities across data, CRAs, scenario analysis, reporting and model development; (ii) streamlining client-level assessments across financial and non-financial ESGR Risk (iii) integrating client transition plans in CRAs, scenario analysis and models; (iv) upskilling employees to enhance portfolio management and oversight on clients exposed to ESGR Risk or divergent from our net zero targets; (v) operationalising support for countries with local ESGR-related regulations, stress testing requirements and disclosures; and (vi) further embedding greenwashing risk.

Managing the financial and non-financial risks from climate change

We manage Climate Risk according to the characteristics of the impacted PRTs.

Risk Framework Owners for the impacted PRTs are responsible for embedding Climate Risk requirements within their respective risk types. In 2024, we have continued to embed Climate Risk into existing risk management frameworks and processes. The Climate Risk identification and assessments across the PRTs span across short, medium, and long-term horizons to enable right level of monitoring and to inform the decision-making process.



See [page 89](#) for more information on the definitions for short, medium and long-term horizons.

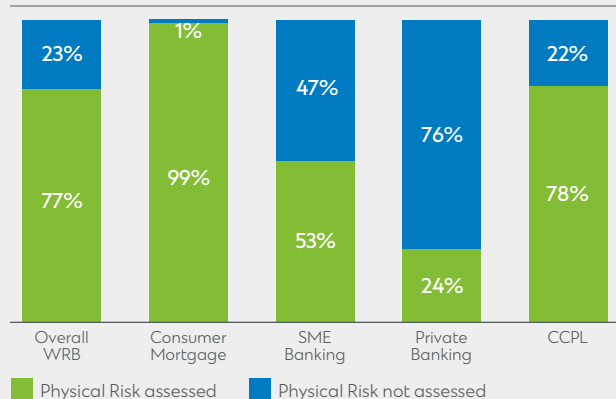
Credit Risk

We have developed a Climate Risk management framework, which outlines the approach for a baseline level of effective risk mitigation.

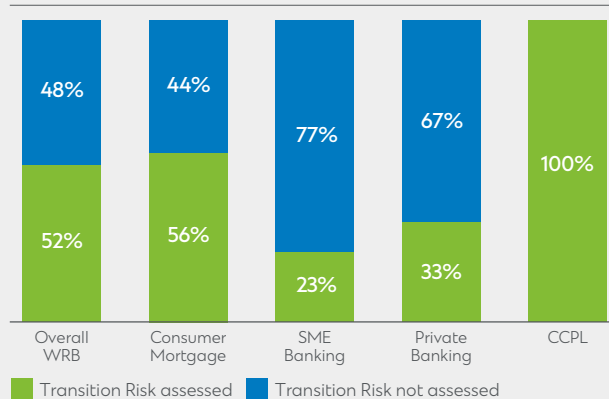
Wealth & Retail Banking (WRB) Credit Risk

In 2024, we progressed further in our journey to embed Climate Risk into our monitoring and risk management across products and segments in the WRB portfolio. In terms of risk assessment coverage, as of September 2024, we have assessed Physical Risk for 77 per cent and Transition Risk for 52 per cent of the overall WRB portfolio.

Physical Risk measurement and monitoring in WRB (as of September 2024)



Transition Risk measurement and monitoring in WRB (as of September 2024)



Outstanding Exposures Assessed

	Overall WRB	Consumer Mortgage	SME Banking	Private Banking	CCPL
Physical Risk	96.7	75.7	5.1	3.2	12.7
Transition Risk	65.6	42.8	2.3	4.3	16.2

1. Physical Risk management approach for WRB

Risk identification and assessment

Secured portfolios (backed by residential, commercial or industrial property)

For our portfolios secured against property collateral, assessments are based on the underlying residential, commercial, or industrial property. We continue to leverage Munich Re's Risk Suite (Natural Hazards Edition) to measure acute and chronic Physical Risk impacting each asset based on their geolocation.

Unsecured portfolios

For our unsecured portfolio, such as credit cards and personal loans, we assess Physical Risk that may have the potential to drive higher credit losses through second-order impacts that affect our customers' ability to repay, employing proxies aligned to credit portfolio risk profiles. In 2024, we enhanced the proxy methodology, using a significantly larger and more representative sample that provided greater stability and accuracy in the resultant risk profiles.

Risk monitoring and reporting

We assess the exposure concentrations subjected to high risk across acute and chronic hazards quarterly and reported these at-risk management committees at Group, region, and country, with a focus on flood risk and rising sea levels, due to the inherent risk profiles of our operating markets. Throughout 2024, physical risk levels across most products and markets have remained largely stable, apart from slight variations in exposure subjected to high flood risk due to Munich Re's storm surge model update, which led to more granular and accurate risk assessments.

Risk management

Physical risk in the residential mortgage portfolio is primarily mitigated under the existing credit underwriting process through the setting of prudent loan-to-value limits, which is supported by a robust and independent property valuation process, as well as the requirement of insurance for the life of the loan. To mitigate the residual risk, which may begin to materialise for our residential mortgages with sustained exposure to heightened Physical Risk, some markets have started establishing zoning policies that involve the identification of high Physical Risk zones and the implementation of differentiated underwriting policy criteria targeting new mortgages originating from these higher-risk regions.

Assessment of acute and chronic Physical Risk for top 10 markets' exposures backed by property collateral, indicating exposure concentration subjected to high gross risk (as of September 2024)

	Global			Korea 23%			Hong Kong 38%			Taiwan 7%		
	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend
Proportion of book												
Flood Risk	13.1%	12.9%	↔	10.6%	10.8%	↔	16.2%	16.3%	↔	11.3%	11.3%	↔
Sea-level rise (Year 2100, RCP 8.5)	2.3%	2.3%	↔	0.6%	0.6%	↔	3.6%	3.6%	↔	0.0%	0.0%	↔
	India 5%			Singapore 18%			Malaysia 4%			UAE 1%		
	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend
Proportion of book												
Flood Risk	18.2%	17.0%	↓	4.6%	4.4%	↔	5.1%	5.2%	↔	6.6%	5.5%	↓
Sea-level rise (Year 2100, RCP 8.5)	1.0%	0.9%	↓	0.1%	0.1%	↔	0.2%	0.3%	↑	36.2%	36.0%	↔
	Jersey 2%			Vietnam 1%			China 2%					
	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend	Q3-23	Q3-24	Trend			
Proportion of book												
Flood Risk	21.9%	19.4%	↓	53.3%	51.1%	↔	50.2%	47.8%	↔			
Sea-level rise (Year 2100, RCP 8.5)	0.0%	0.0%	–	1.2%	1.5%	↑	8.3%	8.6%	↔			

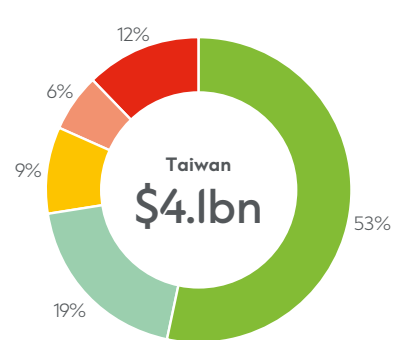
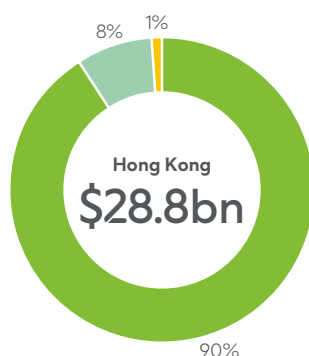
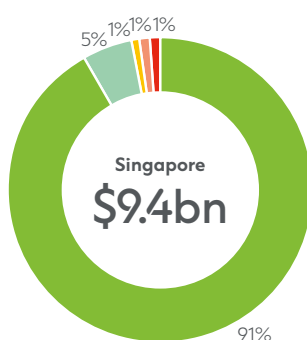
Note: Movements are called out for markets showing a change of more than 5 per cent year-on-year change in exposure concentration subjected to high Physical Risk. The Q3 2023 exposure concentrations have been rebased using the updated Munich Re Risk Suite following the storm surge model update.

2. Transition Risk management approach for WRB

Unlike the UK and Europe, our key residential mortgage markets in Asia, Africa and the Middle East continue to have no regulatory policy requirements around minimum building energy-efficiency standards or government-mandated energy-efficiency rating schemes such as energy performance certificates (EPC). As such, we continue to leverage alternate approaches to gain an early understanding of the proportion of our key mortgage portfolios that may be potentially affected by transition risk, through quantifying the robustness of our clients' income to sustain potential increases in energy spend. In 2024, we refreshed the transition risk assessment of our key mortgage portfolios based on year-end 2023 data, enabling us to do a year-on-year comparison against year-end 2022 results. Based on the analysis in the past two years, we see no material movements and continue to observe low transition risk levels across our key residential mortgage markets. In the future, once additional data becomes available, we aim to account for valuation-related risks of property collateral due to transition risk, which we believe is the most significant transition risk driver for residential mortgages.

Transition Risk ratings using Group mortgage baselining approach by exposure concentration (as of December 2023) – Singapore, Hong Kong, Taiwan

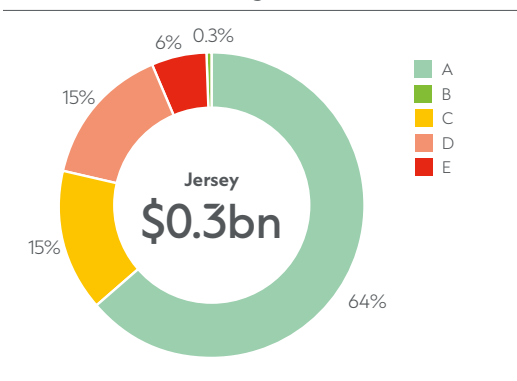
Very high High Medium Low Very Low



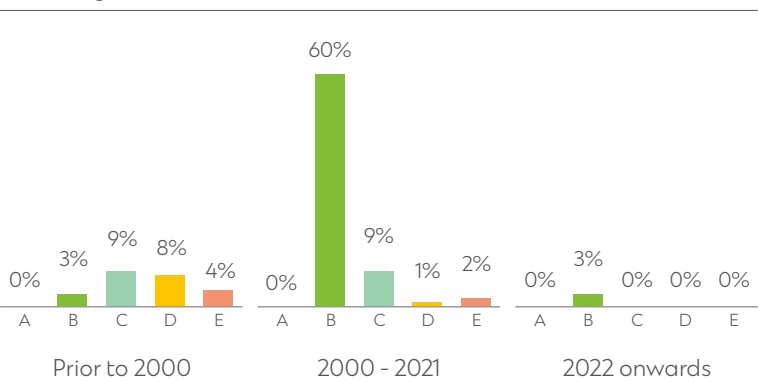
For the Jersey residential mortgage portfolio, which is largely made up of buy-to-let properties located in the UK, we used EPC data to assess the energy-efficiency distribution, with results indicating that circa 80 per cent of the portfolio with available EPC ratings is rated C or better.

2. Transition Risk management approach for WRB continued

Transition Risk ratings for residential mortgages in Jersey using EPC ratings by exposure concentration (as of August 2024)



EPC ratings for residential mortgages in Jersey, by count (as of August 2024)

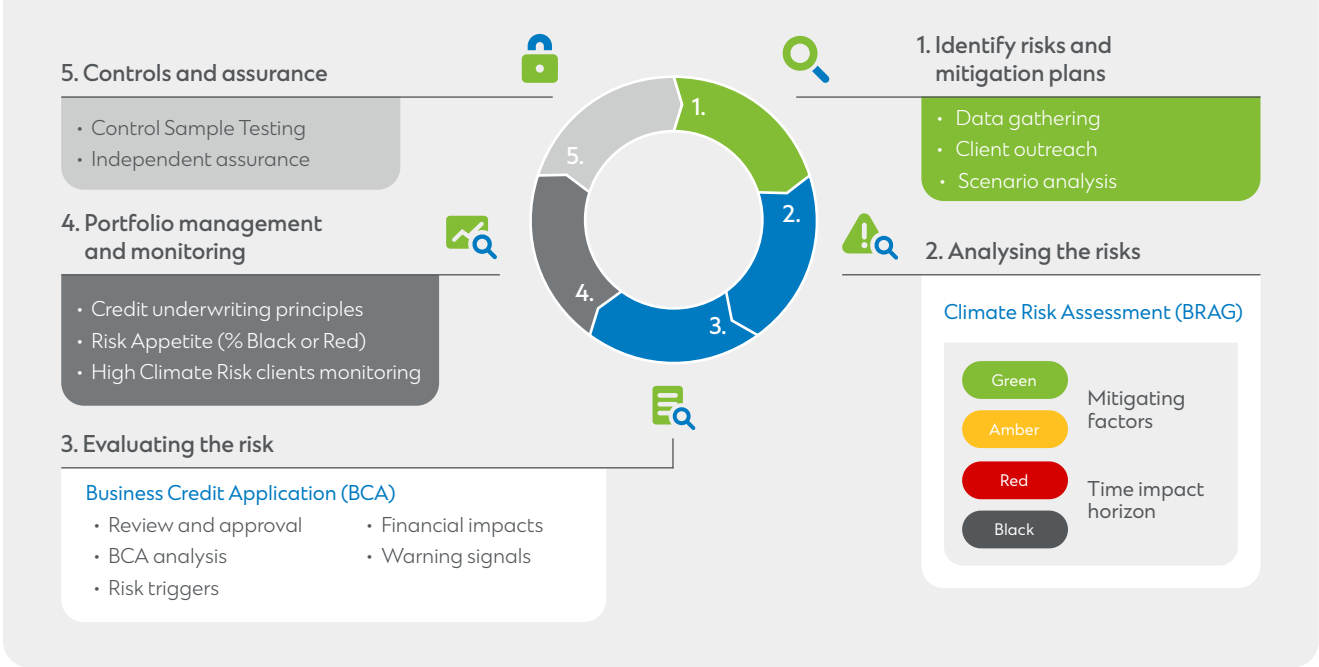


We continue to explore ways to enhance our assessment approaches across both secured and unsecured WRB portfolios through improved methodologies and data. This will enable us to better assess the susceptibility to and readiness of our clients in managing climate-driven risks, while also enabling us to identify opportunities to assist them in their transition towards a low-carbon economy.

Our key focus for 2025 includes expanding the scope of our existing credit origination process to cover climate-related considerations to small and medium business clients. This will enable us to better understand the physical and transition risks faced by our clients, as well as their readiness in adapting to these increasingly consequential risks.

Corporate & Investment Banking (CIB) Credit Risk

This section covers details of how we assess climate risk for our corporate clients, including insights gained from our client-level assessments and progress made to further strengthen our framework for climate and credit related portfolio and risk management. The figure below outlines our process in assessing climate risk.



1. Identify risks and mitigation plans



Our client-level Climate Risk Questionnaire (CRQ) helps assess the potential financial risks from climate change using quantitative and qualitative information. The assessment presents a consolidated view across five pillars of how exposed and ready for transition or adaptation our clients may be. Out of the five pillars, the first one relates to identifying relevant data sources and disclosures and is the only section that is not scored.

Data sources and disclosures	Gross Physical Risk	Physical Risk adaptation	Gross Transition Risk	Credibility of Transition Plans (CTPs)
Reporting <ul style="list-style-type: none"> Sources of data Level of disclosures, Carbon Disclosures Project rating 	Exposure to acute and chronic events <ul style="list-style-type: none"> Asset locations exposed to physical risk events (floods, storms, droughts etc) Model output to assess current and future risk to client's operating locations 	Mitigations to acute and chronic events <ul style="list-style-type: none"> Assessment of client's adaptation plans Insurance coverage to protect against physical risk 	Relative emissions for sector and region <ul style="list-style-type: none"> Reliance on fossil fuel/carbon products, net zero trajectory alignment Policy, environmental impact due to sovereign decarbonisation policy in sector Potential financial impact from various climate scenarios 	Decarbonisation plan, governance and emission targets <ul style="list-style-type: none"> Assess client's plans and its credibility to transition its business and supply chain backed by robust governance mechanisms Emissions reporting targets and plan to achieve them Capex in low-carbon technologies, internal carbon pricing scenarios

The CRQ helps us to form a view of the overall Climate Risk profile of our clients and supports the underlying themes that feed into our broader scenario analysis and corporate planning exercises. Following enhancement in 2023, the CRQ was used to assess our portfolio in 2024. In late 2024, we launched the fourth version of the CRA, which introduced net zero alignment metrics to inform Transition Risks and the outputs from internal models. A key focus for 2025 and beyond is to improve the financial quantification of Physical Risk in the CRA, leveraging Climate X data, which will enable enhanced loss estimation from physical risk hazard events. We have also started to grade Physical Risk for property and shipping backed collaterals.

Coverage of our analysis

As of September 2024, we completed CRAs for 4,065 clients, representing circa 71 per cent of our corporate client limits. The levels and consistency in the availability of climate information from public disclosures has increased in the last three years, however, this is still a developing aspect in some of our footprint markets where the transition journey is in its nascent stages. The difference between our own ambitions and the nationally disclosed contributions in some of our markets has further highlighted the importance of engaging with our clients on this topic, so we are able to assess clients across our markets appropriately.



See [pages 74 to 89](#) for more information on our net zero aspiration.

How different markets in our footprint compare

Clients are assessed across the four pillars relating to gross physical and transition risk, as well as their respective mitigation levels, i.e. physical risk adaptation and credibility of transition plan, each of which are scored between 0 and 100 per cent, with a higher score indicating a better result (e.g. lower risk or higher mitigation levels). The average of these scores across all assessed clients is shown below by market.

Client-level Climate Risk Assessment scores by markets

2024 YTD Assessment	Number of clients	Gross Physical score	Physical Risk adaptation	Gross Transition Risk	Credibility of Transition Plan
Asia – Greater China & North Asia	1,714	65%	33%	51%	52%
Asia – ASEAN & South Asia	939	56%	28%	49%	46%
Africa & Middle East	343	65%	14%	51%	30%
Europe & Americas	1,069	69%	51%	52%	73%
Total	4,065	64%	35%	51%	54%

- Transition Risk scores remained fairly stable and improved across regions.
 - We continue to see better Credibility of Transition and Physical Risk adaptation scores for corporates domiciled in Europe and Americas, where disclosure levels are highest, 2050 net zero plans have been committed to, and the plans to effectively manage Climate Risk are being put in place.
 - There has been a slight slowdown in the pace of transition planning at corporate level given the focus on energy security amidst increased geopolitical pressures. However, the long-term trend of gradual increase in quantifiable climate change commitments, driven by increasing CTPs numbers across markets, is intact.
- Physical Risk adaptation continues to be area of concern for majority of our markets, with the lowest absolute scores in Africa and the Middle East followed by Asia.
- Asia dominates our total volume of clients, with a 65 per cent share of the global client base assessed (2023: 65 per cent; 2022: 62 per cent).

2. Analysing the Climate Risk BRAG ratings



Each client is assigned a colour-coded Climate Risk rating (Black “B”, Red “R”, Amber “A”, Green “G” BRAG) based on the gross transition risk and transition risk mitigation. Owing to Physical Risk data being less robust, we have focused only on Transition Risk drivers to compute the Climate Risk grading. However, as highlighted in the section above, we have seen a steady improvement in the coverage of Physical Risk data in the last few years. We are in the process of incorporating a methodology to include both physical and transition risk drivers to assess the climate risk faced by a client.

There are currently four types of BRAG ratings assigned to clients.

Black

Clients are deemed to have very high exposure to Transition Risk with little or no mitigation plans

Red

Clients are deemed to have very high exposure to Transition Risk but with acceptable or good mitigation plans

Amber

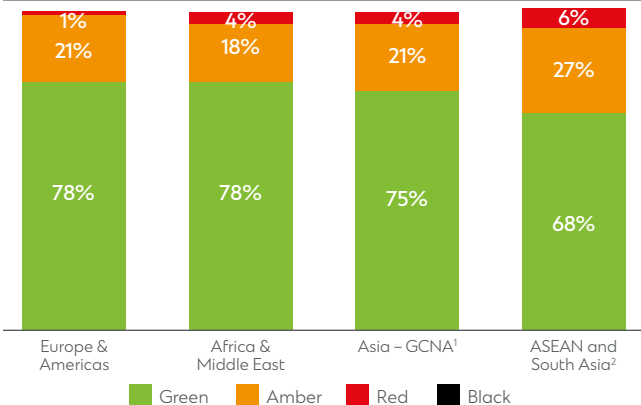
Clients are deemed to have high exposure to Transition Risk but with acceptable or good mitigation plans.

Green

Clients are deemed to have low or limited exposure to Transition Risk

The chart below shows a distribution of Green, Amber, Red, Black rated clients across our markets split by the outstanding exposure as of September 2024. Black-rated clients currently account for less than one per cent of our assessed exposure.

Portfolio Distribution across key markets



1 GCNA countries include China, Hong Kong, Japan, Republic of Korea and Taiwan

2 ASEAN and South Asia countries include Australia, Bangladesh, Indonesia, India, Sri Lanka, Marshall Islands, Macau, Malaysia, Nepal, Philippines, Singapore, Thailand and Vietnam

3. Evaluating the risk (linkage to credit process)



Once a Climate Risk grading is assigned to a client, the impacts from climate-related risks are integrated into the existing credit approval process qualitatively and/or quantitatively through inclusion within the business risk analysis and financial modelling. If the risks are deemed material and not adequately represented via the existing credit rating of the client, subjective warning signals may be added to influence the credit rating. Additionally, risk triggers are added to monitor risks that are not adequately mitigated and to seek additional information from the client where applicable.

4. Portfolio management and monitoring



A. Origination stage

We have embedded qualitative and quantitative climate considerations into the Group's credit underwriting principles for Oil and Gas, Metals and Mining, Shipping, Commercial Real Estate (CRE) and Project Finance portfolios. This includes introducing portfolio-level caps for Black and Red rated clients and lower preference for emission-intensive transactions. The underlying principles vary depending on the sector and are intended to help steer the portfolio in the desired direction over the medium term, and also consider the Group's 2030 financed emission targets.

B. Exposure monitoring and Risk Appetite thresholds

Concentration of Black and Red Climate Risk rated clients remain within proposed Risk Appetite thresholds across our portfolio as of September 2024. Our Green-rated clients are concentrated in more developed markets and this reflects the higher level of Climate Risk disclosures and governance established by companies in these markets. Asia has the highest proportion of exposure, which is rated Red. Amongst the key markets, Bangladesh, Nepal, Vietnam and Indonesia drive this higher risk concentration due to a combination of clients that have fewer disclosures and high Transition Risk, particularly fossil fuel heavy industries, and some imposition of carbon taxes and policies to transition the broader nation. This, combined with weaker transition plans, leads corporates in these markets to be rated as higher Climate Risks.

C. Credit mitigation – collateral

We have expanded coverage of Climate Risk and Credit Risk considerations to assess corporate clients' collateral, given they serve as key risk mitigants, especially in default events. In 2024, an internal methodology was established to identify, assess and incorporate appropriate climate-related risks in property and shipping collateral of corporate clients that were assessed as part of the client-level CRA.

D. High risk client monitoring

A key strategic focus area going forward is to fully embed Climate Risk and net zero targets into business and credit decisions. To enable this, the Net Zero Climate Risk Working Forum (Forum) meets quarterly to discuss account plans for high Climate Risk and net zero divergent clients. Five meetings have been held so far since Q4 2023. The Forum has reviewed Client Groups for Climate Risk and net zero commitment related risks across Power Generation, Oil and Gas, Steel, Cement, Aluminium, CRE and Commodity Trading sectors. The focus of these meetings is to:

- increase engagement with the selected clients to gain a deeper understanding of their transition commitments and the strategies they have in place to achieve them
- drive stronger credit related decisions on exposures primarily in high transition risk sectors (exposure management, credit rating impact)
- identify opportunities to support clients in their decarbonisation journey through advisory and/or financing services
- request further information from clients on Physical Risk adaptation measures employed where Physical Risk is deemed to be high
- decide on relationship strategies where appropriate.

E. Credibility of Transition Plans (CTPs)

We aim to actively manage our exposure by working closely with our existing clients to develop credible transition plans that are consistent with our net zero commitments. We also look for opportunities to support lower emissions-intensive clients. We leverage the data captured in the CRQ and assign a credibility rating to the clients' transition plan based on an in-house scoring methodology that draws on the UK Transition Planning Taskforce and Glasgow Financial Alliance for Net Zero guidance.

The current methodology will be periodically reviewed as the level of client-level climate-related disclosure steps up across our footprint to ensure it remains fit for purpose and in line with industry best practices, stakeholder expectations and regulatory requirements. The CTP has been embedded into the Version 3 CRQ that was implemented in early 2024.

5. Controls and assurance



Independent control checks by the first line of defence and assurance reviews by the second line of defence on integrating Climate Risk within the credit process are carried out quarterly to improve the quality and effectiveness of assessing Climate Risk. The results of the assurance testing and steps to address gaps are periodically shared with impacted stakeholders and as part of governance updates to risk committees.

Environmental, Social and Governance and Reputational (ESGR) Risk

We perform additional client-level due diligence for (i) corporate clients covered by the Group's net zero targets for high-carbon sectors (Oil and Gas, Power, Steel, Aluminium, Cement, Automobiles, Shipping, Aviation, CRE and Agriculture); (ii) clients with a coal nexus¹; and (iii) those that have been assessed at a client-level as high Climate Risk. The assessment focuses on three pillars covering both client and transaction-level aspects:



¹ As defined by the Group's Position Statement to only provide and phase out existing financial services to clients who by 2030, are less than 5 per cent dependent on thermal coal (based on percentage revenue). Additionally, any client that uses thermal coal for captive purposes to support the manufacturing process in industries such as Aluminium, Cement and Steel where there is no economically viable alternative.

The above-mentioned due diligence supplements our existing Environmental and Social (E&S) risk management processes as well as our oversight against our Position Statements and Prohibited Activities list. Reviews are conducted at a client-level to identify root causes, where specific criteria in Position Statements are not fully met or there are individual clients that do not comply with the enhanced E&S criteria, and propose mitigation plans. Such reviews may involve client engagement and seek commitment from clients to take corrective actions. In case of non-compliance with the above-mentioned criteria, such clients are escalated to the Group Responsibility and Reputational Risk Committee, where transactions and clients can be rejected.

The Group has commenced an exercise to consolidate Reputational, E&S and CRAs into a single ESGR Risk assessment, which we aim to roll out in phases over 2025. This assessment will bring together multiple sustainability-related risk themes and improve interlinkages between risk types, as well as integrate a client's degree of alignment against the Group's net zero commitments into the outcome. As a result, client reviews of ESGR-related risks will be undertaken to produce a more cohesive client sustainability assessment.

The Group has governance frameworks and standards for Sustainable Finance (SF) attributes which set out the requirements and responsibilities for managing greenwashing risks through the ongoing monitoring of sustainable finance products, transactions, and clients throughout their lifecycle, from labelling to disclosures. The Green and Sustainable Product Framework, Sustainability Bond Framework and Transition Finance Framework outline how we apply the 'green', 'sustainable' or 'transition' labels across products and transactions. In addition, the E&S Risk Management Framework sets out a series of Position Statements, which serve as our E&S guardrails when assessing in-scope SF transactions and pureplay clients.

All SF products are approved by the Sustainable Finance Governance Committee prior to roll out. All SF-labelled transactions are approved by SF-empowered approvers or the Transition Finance Labelling Sub-Committee on a transaction-by-transaction basis. An assessment toolkit has been developed to standardise the Group's assessment of SF attributes for SF transactions. The Group has built a digitised solution to enable approved SF conditions to be monitored and tracked in a timely manner. To prevent overconcentration of SF liability products, daily monitoring through an automated dashboard has also been established. We have enhanced these standards and controls to incorporate requirements from emerging regulatory obligations, such

as the Financial Conduct Authority's (FCA) anti-greenwashing rule, and to address the market integrity and greenwashing concerns from regulators around the sustainability-linked loan market.

The Group has developed internal guidelines for managing the potential risk of greenwashing in our marketing and advertising, including requirements for the review and approval of sustainability-related marketing campaigns and communications. These requirements have been set out in the governance standards for segment campaigns, corporate communications, and brand management.

Country Risk

The Group uses a set of Physical and Transition Risk rankings to identify the markets most vulnerable and least ready to adapt and mitigate climate-related Physical and Transition Risks.

Based on the aggregated Physical and Transition Risk scores, sovereigns are split into decile-based buckets ranging from 1 (low risk) to 10 (high risk). These rankings are used as qualitative and quantitative inputs to our internal Country Risk management process spanning annual sovereign credit grades and limits reviews, inputs to climate-related scenario analysis, and Risk Appetite.

GCR exposure distribution across the Physical Risk categories (as at 30 September 2024)

Bucket	1 (Best)	2	3	4	5	6	7	8	9	10 (Worst)
Exposures %	11.06%	28.81%	18.25%	5.36%	17.67%	8.69%	1.80%	6.73%	0.67%	0.96%

GCR exposure distribution across the Transition Risk categories (as at 30 September 2024)

Bucket	1 (Best)	2	3	4	5	6	7	8	9	10 (Worst)
Exposures %	3.19%	14.66%	11.21%	35.43%	18.05%	4.81%	3.93%	7.72%	0.86%	0.14%

Insights

- For both Physical and Transition Risk, our exposure to high-risk countries (buckets 9 and 10) remains well below Risk Appetite thresholds.
- The rankings are largely driven by the level of financial risk countries are exposed to and their ability to absorb these losses. As such, the rankings are largely dependent on countries' development stage, economy-wide diversification, in-country inequalities and gross exposure to Transition and Physical Risk shocks.
- Additionally, we keep close track of Transition Risk events, such as the establishment of the EU's and UK's Carbon Border Adjustment Mechanism (CBAM) and its potential impact on our key portfolios. Other markets with carbon pricing mechanisms (such as Singapore, South Korea, South Africa,) are also being monitored as part of Country Risk annual reviews. From a Physical Risk standpoint, the Group continues to monitor extreme weather events in key footprint markets as part of our annual Country Risk reviews.

Limitations

- The computation inputs are based on latest available data which may be dated. Proxies have been used where data for the sovereign is not available.
- The ranking uses equally spaced decile scores and provides the results in an ordinal manner. While the simplicity helps in adoption and provides the relative position of the sovereigns, other systems may provide more information.

Operational, Technology and Cyber Risk

Climate Risk primarily manifests as an operational, technology and cyber risk when Physical Risk disrupts our properties, data centres and vendor arrangements.

We assess the physical risk vulnerabilities of our existing sites on a regular basis and for new sites during the onboarding process. Going forward, we will be ranking sites that are most susceptible to physical risks to make these sites more resilient by exploring infrastructure improvements, where possible. Furthermore, we have enhanced our systems to gather relevant data of our key vendors' delivery locations to assess the Physical Risk to their facilities to ensure business continuity.

We have also evaluated the Transition Risk to achieve net zero in our own operations. The Group relies mainly on Renewable Energy Certificates (RECs) to abate its Scope 2 emissions, given our footprint in less regulated markets where access to renewable energy is often limited or would require significant capital investments. Long-term contracts, such as Purchase Power Agreements, which have more price stability compared to RECs, are being explored, with continued focus on retrofitting properties for improving energy efficiency where possible.

In terms of non-financial ESGR risk management, on-site audits are undertaken for certain vendors assessed to pose high modern slavery risk and adverse media screening enhancements were implemented to cover key phrases and to include modern slavery and human rights.

Assessment of gross Physical Risk at our own operating locations (as of September 2024)

Physical Risk event	Time horizon	Scenario	Asia – GCNA	Asia – ASEAN & South Asia	AME	E&A	Global
Flood (Acute)	2024	N/A	16%	16%	6%	6%	13%
Wildfire (Acute)			0%	0%	0%	0%	0%
Storm (Acute)			26%	8%	0%	6%	14%
Sea-level rise (Chronic)	2100	RCP 8.5	1%	1%	5%	0%	2%
Heat Stress (Chronic)	2050	RCP 8.5	0%	56%	37%	0%	26%
Number of operating locations			390	293	217	31	931

Insights

- From an acute risk perspective, 13 per cent of the Group's locations globally are subjected to extreme flood risk, 14 per cent with extreme storm risk and none at extreme risk from wildfire. Given our footprint, a higher proportion of the Group's locations in GCNA (16 per cent for flood; 26 per cent for storm) and ASEAN and South Asia (16 per cent for flood; 8 per cent for storm) are subjected to extreme acute risks and 6 per cent of locations in Europe and Americas, are subjected to flood risks.
- In the locations where weather events such as storms or cyclones are frequent, the buildings are built in consideration of these risks to local building standards.
- From a chronic risk perspective, under RCP 8.5, our exposure to heat stress is at 26 per cent (37 per cent for AME; 56 per cent for ASEAN and South Asia). Exposure to sea-level rise remains below 5 per cent.
- A broad range of mitigation options are considered, such as property insurance and operating a diversified location strategy to reduce concentration risk.

Traded Risk

We manage the Climate Risk of Traded Risk exposures through the stress-testing framework. Climate risks are incorporated in the scenarios monitored against the Traded Risk stress Risk Appetite, covering all fair value exposures in the trading and banking books.

Climate-related stress scenarios are designed to include transition risk effects from climate change policies and shocks to markets due to supply and demand disruption from physical climate events. Three scenarios are currently in place: two physical and one transitional. The assumptions and results are subject to internal governance. In 2024, a new transition scenario, where the US unexpectedly participates in the CBAM, was approved and will replace the current transition scenario in 2025. The introduction of this scenario will enable us to have a single transition scenario applied across the Group. We continue to address gaps related to market risk factors and shorter-term shocks.

Our Climate Risk management for Traded Risk exposures is evolving and we are working closely with industry bodies and academics to better assess and monitor climate-related risks and opportunities.

Treasury Risk

From a capital perspective, climate risk considerations have been part of our ICAAP submissions since 2019. Our approach for assessing climate risk impact on capital adequacy has improved from qualitative judgements to quantitative simulations across a range of scenarios with the availability of tools and greater understanding of our portfolio. We consider climate risk in our ICAAP across Credit Risk, Operational, Technology and Cyber Risk and Traded Risk.

As understanding of climate risk management and potential forward-looking scenarios develop, our approach and assessment will continue to evolve.

From a liquidity risk perspective, we expanded coverage of the top corporate client liquidity portfolio and continue to monitor for Climate Risk-related vulnerabilities and readiness, leveraging the client outreach and data-gathering exercise undertaken on the asset side. The most recent exposure

concentration in the Red Climate Risk rating is broadly comparable with what we see for our top corporate client exposures on the asset side. Liquidity providers graded Red Climate Risk rating are from Transportation and Storage sectors. The results of the analysis have been considered as part of our Internal Liquidity Adequacy Assessment Process.

Model Risk

Since 2022 we have been building our internal Climate Risk modelling capabilities to assess impacts from Climate Risk, through collaboration with various external vendors. The development of internal Climate Risk models has reduced our reliance on external vendor models, and we will continue to enhance our internal capabilities by extending model coverage (e.g. to develop models to cover more portfolios, or to develop more granular sector-specific models) and incorporating model enhancements recommended by internal and external stakeholders. All the models developed are independently validated by the second line of defence and approved by the Credit Model Assessment Committee. The models were used to estimate climate impact on Expected Credit Loss (ECL) for IFRS 9 and stress testing usages. In 2024 we developed two more sector-specific transition risk probability of default (PD) models for Automotive and Shipping. We also enhanced the corporate transition risk PD models to include improved granularity for the Oil and Gas model which better captures sector-specific risk drivers, changing from a constant to a dynamic interest expense projection and including more accurate capital expenditure calculations. The sovereign climate PD model has also been enhanced by adding material sovereigns, Hong Kong and Singapore, in model calibration.

Key priorities for 2025 include expanding model coverage to capture Physical Risk in PD (for corporates) and loss given default (for corporates and retail mortgages) and Transition Risk for specialised lending scorecards (Project finance and Shipping finance).

Apart from models that are used to estimate ECL, we have developed temperature alignment models that are forward-looking and assess implied temperature rise scores for corporate counterparties. The output from temperature alignment models supports internal climate risk management processes within the Group.

Assessing the resilience of our strategy using scenario analysis

To assess climate-related risks and opportunities in the short, medium and long-term we use scenario analysis to consider how risks and opportunities may evolve under different situations. We have continued to further strengthen our scenario analysis capabilities by moving towards internal models and developing our infrastructure and capabilities to incorporate Climate Risk into data, modelling, and analysis. We have participated in several regulatory climate stress tests in 2024, including the Hong Kong Monetary Authority (HKMA) climate stress test which was based on three long-tenor and one short-tenor scenarios. We are also participating in the Monetary Authority of Singapore's (MAS), Bank Negara Malaysia's (BNM) and Otoritas Jasa Keuangan's (OJK) climate stress tests. Results are expected to be submitted in 2025.

Scenarios used by the Group

The table below summarises the climate risk scenarios used internally by the Group across risk types for scenario analysis, and Group ICAAP assessments.

Risk types	Scenario family	Number of scenarios	Risk measure/usecase	Refer page no
Credit Risk – CIB	Network for Greening the Financial System Version 3 (NGFS v3) Bespoke Tail and Base	6	Stressed ECL	267
Credit Risk – WRB	NGFS v3 Bespoke Tail and Base	6	Stressed ECL, Stranded Assets estimate	268
Operational, Technology and Cyber Risk	Intergovernmental Panel on Climate Change's (IPCC) RCP scenarios	2	Physical Risk concentration for sea-level rise risk	264
Traded Risk	Bespoke (two Physical scenarios and one Transition scenario)	3	Stressed Loss	265

Transition (T) and Physical (P) Risk scenarios

We adapted the following scenarios for our CIB and WRB businesses:

Scenario family	Scenario name	Key features
NGFS Phase 3	Net Zero 2050 (T)	Global warming limited to 1.5°C through stringent climate policies and innovation Global net zero CO ₂ emissions around 2050
	Delayed Transition (T)	Strong policies will be needed to limit warming to below 2°C Annual emissions do not decrease until 2030
	Current Policies (P+T)	No additional policies beyond those currently implemented, along with slow technology change Global temperature rises over 3°C by 2100
Bespoke	In-house Base Case (P+T)	Credibility assessment of countries' current sector targets in the short to medium-term (2030) and a durability assessment of reduction commitments in the long-term (2050) Delayed transition to a low-carbon economy and a lack of early climate action resulting in a 2.5°C temperature rise by 2100
	Green Trade War Tail (T)	Impact to global trade due to introduction of the CBAM leading to trade war escalation Explores risks which are not addressed by the NGFS scenarios and may emerge over a short to medium-term horizon
	Migration Tail (P)	Increasing severe acute weather events globally impact global food prices and drive migration and displacement
IPCC (2050, 2100)	RCP 2.6 (P)	Pathways of greenhouse gas emissions and atmospheric concentrations, air pollutant emissions and land use to project their consequences for the climate system Current and projected hazard scores across a range of hazards such as tropical cyclones, river flood, sea-level rise, heat stress, precipitation stress, wildfire, and drought stress from Munich Re model are used
	RCP 4.5 (P)	
	RCP 8.5 (P)	

The scenarios used for CIB clients are characterised by different levels of transition and physical risk, driven by various features in each scenario.

Oil price: increase (or lack thereof) in oil price impacts on clients' revenues and profitability, and thus helps to determine level of potential credit losses.

Carbon price: increase in carbon price puts additional cost pressure on clients, squeezes the profit margin, and thus helps to determine level of potential credit losses.

Features of the NGFS and Bespoke scenarios used in a Group scenario analysis

Key Variables	Year	NGFS v3			Bespoke scenarios	
		Net Zero 2050	Delayed Transition	Current Policies	Migration Tail Physical Risk	Green Trade War Tail Transition Risk
Temperature rise	2050	1.4°C	1.6°C	3°C+	NA	NA
Carbon price	2030	124	6	6	61	66
(\$2015/tCO ₂)	2050	487	416	7	70	90
Oil price	2030	84	94	94	51	50
(US\$2015/boe)	2050	107	118	125	41	41
Gas price change (vs 2020, %)	2030	56%	43%	43%	15%	15%
	2050	52%	54%	80%	-14%	-14%
Power demand change (vs 2020, %)	2030	27%	35%	35%	20%	20%
	2050	120%	129%	106%	75%	75%
GDP baseline change (vs 2020, %)	2030	34%	36%	36%	-4%	-5%
	2050	111%	110%	118%	-2%	-5%

Scenario analysis results for CIB

We assessed the impact of climate-related risks on our corporate, sovereign, and financial institution clients covering 94 per cent of CIB exposures. This assessment, across the NGFS and Bespoke scenarios, for these clients is primarily reflective of the gross transition risks, and limited impact from physical risks. While client-level transition plans were not factored into the modelling, they were referenced to draw additional insights for priority sectors.

We used the first-generation internally developed transition risk models for NGFS scenarios in 2024, which was the first step in our journey to transition from our reliance on vendor models to in-house capabilities.

The cumulative Loan Impairment (LI) Intensity measures the level of incremental ECL against the exposure at default (EAD). This metric enables us to assess the relative size of our exposure subject to potential losses from climate risks. As the graph below illustrates, cumulative LI intensities do not go beyond three per cent during the forecast horizon for the climate scenarios considered in our scenario analysis. We expect the LI intensity to rise the most in the Green Trade War scenario (Bespoke Tail Transition Risk) and the Migration Tail scenario (Bespoke Tail Physical Risk), followed by the Delayed Transition and Net Zero 2050 scenarios, primarily driven by corporates.

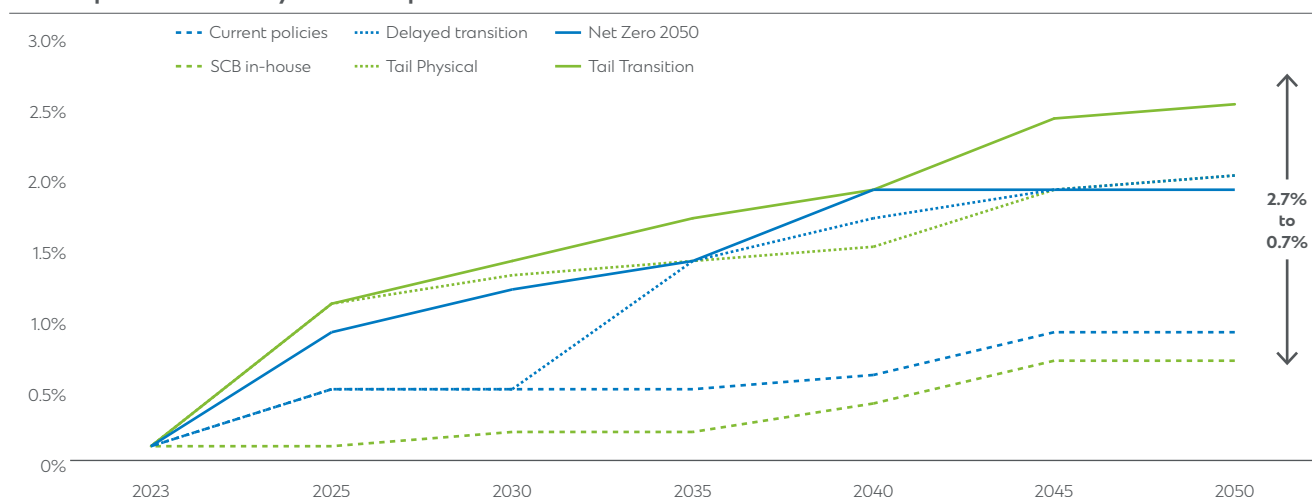
The Green Trade War Tail Transition Risk scenario shows the highest LI intensity, reflecting the potential risks to the global economy and subsequent increase in credit losses that may manifest due to the climate subsidy competition and introduction of CBAM. The high LI intensity in the Migration Tail Physical Risk scenario is due to typhoons in the east Asian economic hubs along with floods in India and Pakistan leading to mass migration and drop in world GDP. The high LI intensity in the Delayed Transition scenario depicts that delayed transition will be disruptive due to a lower level of innovation that limits the ability to decarbonise effectively, and rising carbon prices that squeeze profit margins. The high LI intensity in the Net Zero 2050 scenario is reflective of the high transition risks noted by higher carbon prices, coupled with the need for greater investment to move to a low-carbon economy. Relatively lower LI intensity observed in the NGFS Current Policies scenario reflects the nascent modelling capabilities on assessing the physical risk impact to client asset locations and second-order impacts, such as that on the supply chain.

Overall, we believe that the level of potential credit losses can be mitigated by continuing to take actions, which the Group is already doing across sectors as part of its net zero roadmap, engaging with our clients on this topic and supporting clients on their transition journey.



See [page 74](#) for more information on the Group's transition plan

Loan Impairment Intensity for the Corporate Portfolio



Loan Impairment (LI) Intensity is calculated as gross expected credit losses (ECL) over exposure at default (EAD)

For corporate clients, we focused on the sectors in the table below that have been identified as more vulnerable to potential climate impacts. As of December 2023, these sectors represented circa 48 per cent of our corporate portfolio.

Under the NGFS scenarios assessed, sectors such as Oil and Gas, Utilities, and Automobiles and Components are most impacted, primarily due to the rise in carbon prices in the scenarios and to some extent by the consequent macroeconomic changes. For the internal scenarios, GDP crashes and second-order risks impact corporate clients across Oil and Gas, Utilities, Transportation and Construction sectors. The change in LI intensities compared with previous disclosures is due to a combination of factors including adoption of in-house models for NGFS scenarios and changes in portfolio mix, amongst others.

Loan Impairment intensities for key corporate sectors for the NGFS and Bespoke scenarios

Long Term – 2050	EAD Y0 (%)	NGFS v3 Net Zero 2050	NGFS v3 Delayed Transition	NGFS v3 Current policies	Bespoke Baseline	Bespoke Tail Transition Risk	Bespoke Tail Physical Risk
Automobiles & Components	3%	Medium	Medium	Medium	Low	Medium	Medium
Building Products, Construction & Engineering	5%	Medium	Medium	Low	Medium	Medium	Medium
Consumer Durables & Apparel	5%	Low	Low	Low	Low	Medium	Medium
CRE	9%	Medium	Medium	Low	Low	Medium	Medium
Metals & Mining	4%	Low	Low	Low	Low	Low	Low
Oil & Gas	8%	High	High	Medium	Medium	High	Medium
Telecommunication Services	1%	Low	Low	Low	Low	Medium	Low
Transportation & Storage	8%	Low	Low	Low	Medium	High	Medium
Utilities	4%	High	High	High	Medium	Medium	Medium
Total portfolio	100%	Medium	Medium	Low	Low	Medium	Medium

Exposure at Default (EAD) data is as of December 2023

The results are used to assess the impact of climate change on our portfolio and provide management information to monitor stressed LI over the next five-year horizon under plausible and extreme climate scenarios. The results also form part of our CRAs. While further enhancements to our modelling and risk assessment capabilities are ongoing, the results of scenario analysis have provided further validation to the actions the Group is taking in terms of our net zero ambitions and strategy. Additionally, it aligns with our management initiatives aimed at improving the data quality and building in-house modelling expertise. The results have been subject to internal governance, including review and challenge by an expert panel and discussion at the CRMC and BRC.

Scenario analysis results for WRB

WRB scenario analysis capabilities in 2024 considered the changes in portfolio mix, use of NGFS scenarios, Bespoke Base Case and short to medium-term tail risk scenarios and incorporating a more analytical and data-driven approach to management adjustments.

The impact of climate risk is captured through macroeconomic variables that are influenced under a range of climate conditions and by incorporating the following additional considerations:

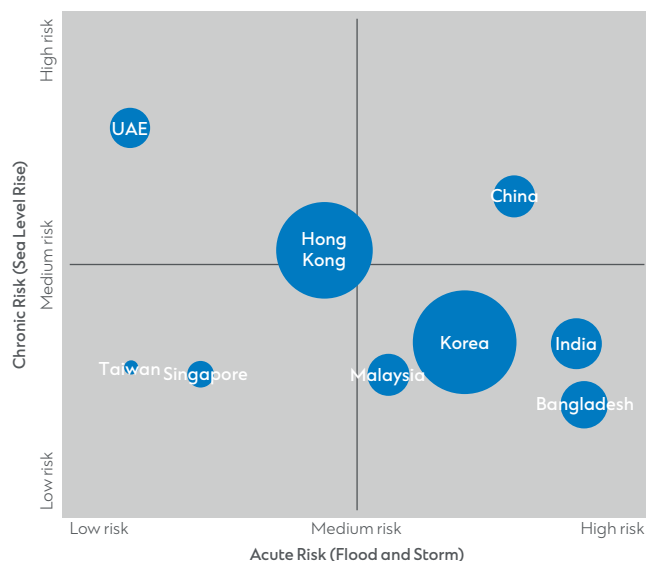
- For our key residential mortgage markets, we reassess property valuations under different climate scenarios using the forward-looking risk indices from Munich Re. These revaluations are then used to inform haircuts on the property prices and arrive at climate-adjusted ECL.
- The impact of elevated energy bills was taken into consideration for the credit card portfolio to address the transition risks for key markets.
- Stranded assets analysis was conducted for residential mortgages to account for the extreme physical risks under the NGFS Current Policies and Migration Tail Physical Risk scenarios. We define stranded assets as properties that are expected to become uninhabitable and/or unusable due to increased frequency and intensity of physical risk events from acute and chronic risks. These stranded assets are expected to see a complete erosion to the value of the property. Insurance benefits were not considered beyond 2030 to build a conservative estimate, given the potential issues around affordability and availability of insurance for such stranded assets in the longer term.

The following chart illustrates the stranded asset losses for 2050 across key residential mortgage markets under the RCP 8.5 scenario based on Munich Re's Risk Suite (Natural Hazards Edition). We examined exposure concentration in key markets subject to the extreme risk of floods and storms to assess the acute physical risk, and sea-level rise to assess the chronic physical risk. This analysis also considered additional details, such as age and type of the property and in-built flood defence mechanism for the acute risk and distance to coast for the chronic risk, subject to data availability.

Markets such as Korea, India, Malaysia, China, and Bangladesh exhibit a higher level of potential losses as more properties in these markets will be exposed to flood and storm risks by the year 2050. While properties in UAE exhibit a higher level of sea-level rise risk by the year 2050. It is important to note that while the management adjustments related to stranded assets and higher energy bills are data-driven, they also involve an element of judgement, and represent gross physical risk measures as they do not consider the level of adaptation measures enforced by government policies. We will continue to refine the approach to ensure its effectiveness. These results have been subject to internal governance, including review and challenge by an expert panel and discussion at the CRMC and BRC, and are shared with the first line of defence and the second line of defence for portfolio monitoring and to guide risk management strategies.

Our peak LI intensities for 2050 across the range of climate scenarios, after incorporating stranded asset overlay, do not exceed 3.1 per cent relative to the counterfactual base scenario without climate impacts. Insurance policies currently mandated in the key markets such as Hong Kong, China and UAE cover the damages that may be caused by flood and storm in the short to medium-term. In Korea, where the homeowners' insurance coverage does not fully mitigate residual physical risks, we have established zoning policies to ringfence against properties subject to high physical risk. These measures will help to ensure that the Group remains resilient to the adverse climate conditions. We also continue to actively manage the mortgage portfolio to mitigate physical risks build-up.

Expected losses due to stranded assets for retail mortgages by 2050 (December 2023 snapshot)



The size of the bubble is indicative of the gross stranded asset losses assessed for all of the residential mortgage book

Recent events in countries like Bangladesh, China, and the UAE have highlighted the increasing frequency, intensity, and unexpected nature of natural disasters. In Bangladesh, heavy monsoon rains have led to significant flooding, displacing thousands of people, and causing extensive damage to infrastructure and agriculture. Similarly, in China, floods from heavy rainfall began in Guangdong Province and spread northward, raising water levels in the Yangtze River and the Pearl River Delta, and resulted in significant flood damage and economic loss. While the UAE is typically known for its arid climate, recent storms have brought unexpected rainfall, leading to localised flooding and disruption. These events serve as a reminder of the vulnerabilities due to climate change.

Despite recent challenges, the Group has exhibited significant resilience, attributable to its robust balance sheet and risk management practices.

Limitations and next steps

Reliance on nascent methodologies, dependencies on first-generation models and data limitations are some challenges that underpin the scenario analysis. Many of these limitations are shared across the industry. Given the complexities of climate modelling, it should also be noted that the results do not include the real-world aspects, such as the non-linear shifts and complex feedback loops. As more solution providers become available and banks start to use them extensively to build internal understanding and capabilities, the transparency and sophistication of modelling methodologies and assumptions will increase.

Nonetheless, the current results provide a strategic direction of the sense of portfolio concentrations subject to potential climate losses. These results are used to inform portfolio oversight and opportunity identification with clients on their transition and adaptation pathways.

Additionally, considerable developments have been made in building capability from a people, process, and technology perspective to support stress tests and scenario analysis at both Group and country level. As we look ahead, integrating internal climate risk models within the Group's infrastructure will be a key priority for the upcoming years. The development of a management actions playbook to incorporate the elements of climate risk is under way.

Qualitative review of climate risks and opportunities in annual business strategy and financial planning

In 2024, Climate Risk was considered as part of our formal annual corporate strategy and financial planning process. We use both qualitative and quantitative aspects focusing on revenue reliance from clients in high-emitting sectors and/or locations most exposed to physical risk, considering the adequacy of mitigation plans. The results are then independently reviewed by regional and client-segment Chief Risk Officers and the ESGR Risk team. The Board considers the impact of climate risk as part of their approval of the corporate plan. The 2025 corporate plan includes an increase in LI due to the impact from Climate Risk. A revenue at risk sensitivity analysis to the corporate plan was performed over the five-year period assuming limited transition, i.e., no client transition plans and no client engagement. This was considered as a potential downside risk to the corporate plan only, given the prudent scenario.

In most cases, the Physical and Transition risks identified were assessed to be well controlled in the short to medium-term. We are instituting controls around both new and existing clients with the aim to align those client carbon emission intensities and ambitions to be commensurate with the Group's portfolios, or there are plans in place to work with the client on their transition journey. This alignment, done at a portfolio level, and done through balancing existing business with sustainable and transition finance products to clients in high-emitting sectors to help decarbonise their business models. Further our growth ambition includes sectors with lower carbon intensity or emissions such as clean and transition technology. Our Sustainable and Transition Finance product suite and our dedicated Sustainable Finance, Transition Acceleration and ESG advisory teams aim to mitigate transition risks in the short to medium-term, strengthening our resilience towards a 2°C or lower transition scenario. However, longer-term transition risks were highlighted, particularly for Africa and the Middle East region, given its dependency on fossil fuels; and longer-term physical risks were deemed to be most relevant for the Asia region.

Capital review

The Capital review provides an analysis of the Group's capital and leverage position, and requirements.

Capital summary

The Group's capital, leverage and minimum requirements for own funds and eligible liabilities (MREL) position is managed within the Board-approved risk appetite. The Group is well capitalised with low leverage and high levels of loss-absorbing capacity.

	2024	2023
CET1 capital	14.2%	14.1%
Tier 1 capital	16.9%	16.3%
Total capital	21.5%	21.2%
Leverage ratio	4.8%	4.7%
MREL ratio	34.2%	33.3%
Risk-weighted assets (RWA) \$million	247,065	244,151

The Group's capital, leverage and MREL positions were all above current requirements and Board-approved risk appetite. For further detail see the Capital section in the Standard Chartered PLC Pillar 3 Disclosures for FY 2024. The Group's CET1 capital increased 19 basis points to 14.2 per cent of RWA since FY2023. Profits, movements in FVOCI, FX translation reserves and decrease in regulatory deductions were partly offset by RWA growth and distributions (including ordinary share buybacks of \$2.5 billion during the year).

The PRA updated the Group's Pillar 2A requirement during Q4 2024. As at 31 December 2024 the Group's Pillar 2A was 3.7 per cent of RWA, of which at least 2.1 per cent must be held in CET1 capital. The Group's minimum CET1 capital requirement was 10.5 per cent at 31 December 2024.

The Group CET1 capital ratio at 31 December 2024 reflects the share buybacks of \$2.5 billion announced during the year. The CET1 capital ratio also includes an accrual for the FY 2024 dividend. The Board has recommended a final dividend for FY 2024 of \$679 million or 28 cents per share resulting in a full year 2024 dividend of 37 cents per share, a 37 per cent increase on the 2023 dividend. In addition, the Board has announced a further share buyback of \$1.5 billion, the impact of this will reduce the Group's CET1 capital by around 61 basis points in the first quarter of 2025.

The Group expects to manage CET1 capital dynamically within our 13-14 per cent target range, in support of our aim of delivering future sustainable shareholder distributions.

The Group's MREL leverage requirement as at 31 December 2024 was 27.6 per cent of RWA. This is composed of a minimum requirement of 23.7 per cent of RWA and the Group's combined buffer (comprising the capital conservation buffer, the G-SII buffer and the countercyclical buffer). The Group's MREL ratio was 34.2 per cent of RWA and 9.7 per cent of leverage exposure at 31 December 2024.

During 2024, the Group successfully raised \$9.1 billion of MREL eligible securities from its holding company, Standard Chartered PLC. Issuance include \$1.6 billion of Additional Tier 1 and \$7.5 billion of callable senior debt.

The Group raised an additional \$1.0 billion of Additional Tier 1 and \$2.5 billion in senior securities post the balance sheet date, i.e. not included in the FY 2024 MREL position.

The Group is a G-SII, with a 1.0 per cent G-SII CET1 capital buffer. The Standard Chartered PLC G-SII disclosure is published at: sc.com/en/investors/financial-results.

Capital base¹ (audited)

	2024 \$million	2023 \$million
CET1 capital instruments and reserves		
Capital instruments and the related share premium accounts	5,201	5,321
Of which: share premium accounts	3,989	3,989
Retained earnings	24,950	24,930
Accumulated other comprehensive income (and other reserves)	8,724	9,171
Non-controlling interests (amount allowed in consolidated CET1)	235	217
Independently audited year-end profits	4,072	3,542
Foreseeable dividends	(923)	(768)
CET1 capital before regulatory adjustments	42,259	42,413
CET1 regulatory adjustments		
Additional value adjustments (prudential valuation adjustments)	(624)	(730)
Intangible assets (net of related tax liability)	(5,696)	(6,128)
Deferred tax assets that rely on future profitability (excludes those arising from temporary differences)	(31)	(41)
Fair value reserves related to net losses on cash flow hedges	(4)	(91)
Deduction of amounts resulting from the calculation of excess expected loss	(702)	(754)
Net gains on liabilities at fair value resulting from changes in own credit risk	278	(100)
Defined-benefit pension fund assets	(149)	(95)
Fair value gains arising from the institution's own credit risk related to derivative liabilities	(97)	(116)
Exposure amounts which could qualify for risk weighting of 1250%	(44)	(44)
Total regulatory adjustments to CET1	(7,069)	(8,099)
CET1 capital	35,190	34,314
Additional Tier 1 capital (AT1) instruments	6,502	5,512
AT1 regulatory adjustments	(20)	(20)
Tier 1 capital	41,672	39,806
Tier 2 capital instruments	11,449	11,965
Tier 2 regulatory adjustments	(30)	(30)
Tier 2 capital	11,419	11,935
Total capital	53,091	51,741
Total risk-weighted assets (unaudited)	247,065	244,151

1 Capital base is prepared on the regulatory scope of consolidation

Movement in total capital (audited)

	2024 \$million	2023 \$million
CET1 at 1 January	34,314	34,157
Ordinary shares issued in the period and share premium	–	–
Share buyback	(2,500)	(2,000)
Profit for the period	4,072	3,542
Foreseeable dividends deducted from CET1	(923)	(768)
Difference between dividends paid and foreseeable dividends	(469)	(372)
Movement in goodwill and other intangible assets	432	(326)
Foreign currency translation differences	(525)	(477)
Non-controlling interests	18	28
Movement in eligible other comprehensive income	636	464
Deferred tax assets that rely on future profitability	10	35
Decrease/(increase) in excess expected loss	52	(70)
Additional value adjustments (prudential valuation adjustment)	106	124
IFRS 9 transitional impact on regulatory reserves including day one	2	(106)
Exposure amounts which could qualify for risk weighting	–	59
Fair value gains arising from the institution's own Credit Risk related to derivative liabilities	19	(26)
Others	(54)	50
CET1 at 31 December	35,190	34,314
AT1 at 1 January	5,492	6,484
Net issuances (redemptions)	1,015	(1,000)
Foreign currency translation difference and others	(25)	8
AT1 at 31 December	6,482	5,492
Tier 2 capital at 1 January	11,935	12,510
Regulatory amortisation	1,189	1,416
Net issuances (redemptions)	(1,517)	(2,160)
Foreign currency translation difference	(191)	146
Tier 2 ineligible minority interest	(3)	19
Others	6	4
Tier 2 capital at 31 December	11,419	11,935
Total capital at 31 December	53,091	51,741

The main movements in capital in the period were:

- CET1 capital increased by \$0.9 billion as retained profits of \$4.1 billion, movement in FVOCI of \$0.6 billion and a reduction in regulatory deductions and other movements of \$0.6 billion were partly offset by share buybacks of \$2.5 billion, distributions paid and foreseeable of \$1.4 billion, foreign currency translation impact of \$0.5 billion.
- AT1 capital increased by \$1.0 billion following the issuance of \$1.0 billion of 7.88 per cent securities and \$0.6 billion of 5.30 per cent securities partly offset by the redemption of \$0.6 billion of 5.38 per cent securities.
- Tier 2 capital decreased by \$0.5 billion due to the redemption of \$1.6 billion of Tier 2 during the year partly offset by the reversal of regulatory amortisation and foreign currency translation impact.

Risk-weighted assets by business

	2024			
	Credit risk \$million	Operational risk \$million	Market risk \$million	Total risk \$million
Corporate & Investment Banking	112,100	19,987	24,781	156,868
Wealth & Retail Banking	41,002	9,523	–	50,525
Ventures	2,243	142	21	2,406
Central & Other items	33,958	(173)	3,481	37,266
Total risk-weighted assets	189,303	29,479	28,283	247,065
	2023			
Corporate & Investment Banking	102,675	18,083	21,221	141,979
Wealth & Retail Banking	42,559	8,783	–	51,342
Ventures	1,885	35	3	1,923
Central & Other items	44,304	960	3,643	48,907
Total risk-weighted assets	191,423	27,861	24,867	244,151

Movement in risk-weighted assets

	Credit risk							
	Corporate & Investment Banking \$million	Wealth & Retail Banking \$million	Ventures \$million	Central & Other items \$million	Total \$million	Operational risk \$million	Market risk \$million	Total risk \$million
At 1 January 2023	110,103	42,091	1,350	43,311	196,855	27,177	20,679	244,711
Assets growth & mix	(4,424)	728	535	1,183	(1,978)	–	–	(1,978)
Asset quality	(391)	390	–	2,684	2,683	–	–	2,683
Risk-weighted assets efficiencies	–	–	–	(688)	(688)	–	–	(688)
Model Updates	(597)	(151)	–	(151)	(899)	–	500	(399)
Methodology and policy changes	–	(196)	–	–	(196)	–	(800)	(996)
Acquisitions and disposals	(1,630)	–	–	–	(1,630)	–	–	(1,630)
Foreign currency translation	(386)	(303)	–	(2,035)	(2,724)	–	–	(2,724)
Other, Including non-credit risk movements	–	–	–	–	–	684	4,488	5,172
At 31 December 2023	102,675	42,559	1,885	44,304	191,423	27,861	24,867	244,151
Assets growth & mix	11,412	341	358	(5,803)	6,308	–	–	6,308
Asset quality	(1,349)	112	–	(1,935)	(3,172)	–	–	(3,172)
Risk-weighted assets efficiencies	–	–	–	–	–	–	–	–
Model Updates	1,620	(1)	–	–	1,619	–	(400)	1,219
Methodology and policy changes	38	39	–	–	77	–	(1,300)	(1,223)
Acquisitions and disposals	–	–	–	–	–	–	–	–
Foreign currency translation	(2,296)	(1,207)	–	(1,374)	(4,877)	–	–	(4,877)
Other, Including non-credit risk movements	–	(841)	–	(1,234)	(2,075)	1,618	5,116	4,659
At 31 December 2024	112,100	41,002	2,243	33,958	189,303	29,479	28,283	247,065

Movements in risk-weighted assets

RWA increased by \$2.9 billion, or 1.2 per cent from 31 December 2023 to \$247.1 billion. This was mainly due to decrease in Credit Risk RWA of \$2.1 billion, an increase in Market Risk RWA of \$3.4 billion and Operational Risk RWA of \$1.6 billion.

Corporate & Investment Banking

Credit Risk RWA increased by \$9.4 billion, or 9.2 per cent from 31 December 2023 to \$112.1 billion mainly due to:

- \$11.4 billion increase from changes in asset growth & mix, of which:
 - \$9.0 billion increase from asset growth
 - \$3.1 billion increase from derivatives
 - \$0.8 billion decrease from optimisation actions
- \$1.6 billion increase from industry-wide regulatory changes to align IRB model performance from adjustment to commercial real estate counterparties
- \$2.3 billion decrease from foreign currency translation
- \$1.3 billion decrease mainly due to an improvement in asset quality reflecting client upgrades

Wealth & Retail Banking

Credit Risk RWA decreased by \$1.6 billion, or 3.7 per cent from 31 December 2023 to \$41.0 billion mainly due to:

- \$1.2 billion decrease from foreign currency translation
- \$0.8 billion decrease from reclassification of credit cards in Asia
- \$0.3 billion increase from changes in asset growth & mix
- \$0.1 billion increase mainly due to deterioration in asset quality mainly in Asia

Ventures

Ventures is comprised of Mox Bank Limited, Trust Bank and SC Ventures. Credit Risk RWA increased by \$0.4 billion, or 19 per cent from 31 December 2023 to \$2.2 billion from asset balance growth, mainly from SC Ventures.

Central & Other items

Central & Other items RWA mainly relate to the Treasury Market's liquidity portfolio, equity investments and current & deferred tax assets.

Credit Risk RWA decreased by \$10.3 billion, or 23.4 per cent from 31 December 2023 to \$34.0 billion mainly due to:

- \$5.8 billion decrease from changes in asset growth & mix primarily from optimisation activities
- \$1.9 billion decrease due to improvement in asset quality mainly from sovereign upgrades in Asia and Africa
- \$1.4 billion decrease from foreign currency translation
- \$1.2 billion decrease due to reporting enhancements

Market Risk

Total Market Risk RWA increased by \$3.4 billion, or 13.7 per cent from 31 December 2023 to \$28.3 billion primarily driven by:

- \$1.7 billion increase in Standardised Approach (SA) Specific Interest Rate Risk RWA mainly due to increases in the Trading Book government bond portfolio
- \$2.7 billion increase in Internal Models Approach (IMA) RWA from increases in VaR and Stressed VaR RWA due mainly to increased interest rate exposures, offset by a reduction of addons for Risks not in VaR
- \$1.3 billion in the first quarter decrease due to a reduction in the IMA RWA multiplier resulting from fewer back-testing exceptions

Operational Risk

- Operational Risk RWA increased by \$1.6 billion, or 5.8 per cent from 31 December 2023 to \$29.5 billion, mainly due to a marginal increase in average income as measured over a rolling three-year time horizon for certain products.

Leverage ratio

The Group's leverage ratio, which excludes qualifying claims on central banks, was 4.8 per cent at FY2024, which was above the current minimum requirement of 3.7 per cent. The leverage ratio was 10 basis points higher than FY2023. Leverage exposure increased by \$21.2 billion from decrease in claims on central banks of \$15.5 billion, an increase in Derivatives of \$15.9 billion, securities financing transactions of \$1.2 billion, decrease in asset amounts deducted in determining Tier 1 capital (Leverage) of \$0.6 billion, partly offset by decrease in Off-balance sheet items of \$5.0 billion, Other Assets of \$4.7 billion, and securities financing transaction add-on of \$2.4 billion. Tier 1 capital increased by \$1.9 billion as CET1 capital increased by \$0.9 billion and AT1 capital increased by \$1.0 billion following the issuance of \$1.6 billion partly offset by the redemption of \$0.6 billion AT1 securities.

Leverage ratio

	31.12.24 \$million	31.12.23 \$million
Tier 1 capital (end point)	41,672	39,806
Derivative financial instruments	81,472	50,434
Derivative cash collateral	11,046	10,337
Securities financing transactions (SFTs)	98,801	97,581
Loans and advances and other assets	658,369	664,492
Total on-balance sheet assets	849,688	822,844
Regulatory consolidation adjustments¹	(76,197)	(92,709)
Derivatives adjustments		
Derivatives netting	(63,934)	(39,031)
Adjustments to cash collateral	(10,169)	(9,833)
Net written credit protection	2,075	1,359
Potential future exposure on derivatives	51,323	42,184
Total derivatives adjustments	(20,705)	(5,321)
Counterparty risk leverage exposure measure for SFTs	4,198	6,639
Off-balance sheet items	118,607	123,572
Regulatory deductions from Tier 1 capital	(7,247)	(7,883)
Total exposure measure excluding claims on central banks	868,344	847,142
Leverage ratio excluding claims on central banks (%)	4.8%	4.7%
Average leverage exposure measure excluding claims on central banks	894,296	853,968
Average leverage ratio excluding claims on central banks (%)	4.7%	4.6%
Countercyclical leverage ratio buffer	0.1%	0.1%
G-SII additional leverage ratio buffer	0.4%	0.4%

¹ Includes adjustment for qualifying central bank claims and unsettled regular way trades