2022

The Hongkong and Shanghai Banking Corporation Limited, Bangkok Branch

Pillar 3 Disclosures at 31 December 2022

Contents

Tables

Cautionary statement regarding forward-looking statements

The *Pillar 3 Disclosures 2022* contains certain forward-looking statements with respect to the financial condition of The Hongkong and Shanghai Banking Corporation Limited, Bangkok Branch ('the Bank'), results of operations, capital position and business.

Statements that are not historical facts, including statements about the Bank's beliefs and expectations, are forward-looking statements. Words such as 'may', 'will', 'should', 'expects', 'targets', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', or the negative thereof, other variations thereon or similar expressions are intended to identify forward-looking statements. These statements are based on current plans, information, data, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made. The Bank makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements. Forward-looking statements involve inherent risks and uncertainties. Readers are cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward-looking statement. These include, but are not limited to:

- changes in general economic conditions in the markets in which we operate,
- changes in government policy and regulation, including the monetary, interest rate and other policies of central banks and other regulatory authorities, and
- factors specific to the Bank, including our success in adequately identifying the risks we face, such as the incidence of loan losses or delinquency, and managing those risks (through account management, hedging and other techniques).

Introduction

Purpose

This document comprises the Bank's Pillar 3 disclosures on capital and risk management at 31 December 2022. It meets the regulatory disclosure requirements under the Bank of Thailand ('BoT') Notification dated 2 May 2013 and 7 May 2019, Re: The Public Disclosure of Capital Maintenance for Commercial Banks. It also serves to comply with the disclosures on Liquidity Coverage Ratio as required by the BoT's Notification dated 25 January 2018, Re: Liquidity Coverage Ratio Disclosure Standards.

Unless the context requires otherwise, 'HSBC Holdings' means HSBC Holdings plc and 'HSBC' and the 'Group' refer to HSBC Holdings together with its subsidiaries.

These disclosures are governed by the Bank's disclosure policy, which has been approved by the Asset and Liability Management Committees ('ALCOs').

This document should be read in conjunction with the Bank's annual financial statements for the year ended 31 December 2022, which has been published on our website at www.hsbc.co.th.

Key prudential metrics

Table 1 : Key prudential metrics

	31 December 2022	30 June 2022	31 December 2021
Available capital (THBm)			
Total capital	22,600	22,600	22,600
Fully loaded Expected Credit Losses total capital	22,600	22,600	22,600
Risk-weighted assets ('RWAs') (THBm)			
Total RWAs	133,404	124,445	113,340
Capital ratios (%)			
Total capital ratio	16.9	18.2	19.9
Fully loaded Expected Credit Losses total capital ratio	16.9	18.2	19.9
Additional capital buffer requirements as a percentage of RWA (%)			
Capital conservation buffer requirement	2.5	2.5	2.5
Countercyclical buffer requirement	-	-	-
Higher loss absorbency requirement	-	-	-
Total of capital specific buffer requirements	2.5	2.5	2.5
Capital ratio in excess of minimum requirements	5.9	7.2	8.9
Total capital ratio requirement (%)			
Total capital ratio including capital buffer	11.0	11.0	11.0
Minimum capital ratio requirements	8.5	8.5	8.5

	Average Balance		
	2022 Quarter 4	2022 Quarter 2	2021 Quarter 4
Liquidity Coverage Ratio ('LCR')			
Total high-quality liquid assets (THBm)	93,530	113,120	102,388
Total net cash outflows (THBm)	47,075	61,443	58,288
LCR ratio (%)	199	185	176

With reference to the implementation of Thai Financial Reporting Standard ('TFRS') 9 'Financial Instruments' effective from 1 January 2020, the BoT set out transitory provisions allowing a phased approach to minimise the impact on capital.

The increase in impairment provision or Expected Credit Loss ('ECL') on day one of TFRS 9 adoption can be adjusted to its retained earnings. A negative retained earning must be deducted from capital. The BoT permit banks to add back to their capital base on straight-line approach over 6 accounting periods (6-month accounting period).

While the provision in excess of ECL would be released over five years on straight-line basis during the transition period starting on 1 January 2020 according to the BoT's notification dated 6 November 2019.

The BoT also set a guidance to set aside a minimum 1% of provisions for unimpaired assets and off-balance sheet items ('minimum provisions'). The minimum provisions was phased in: starting at 0.33% from 1 January 2020 and increasing a further 0.33% each year and have completed at 1% in 1 January 2022. If the available provisions are less than minimum provisions, such shortfall of provision would be deducted from retained earnings or capital as appropriated.

As of 1 January 2020, our provision was in excess the ECL by Baht 900 million. This surplus reserve would be released over five years on straight-line basis of Baht 180 million per annum. At 31 December 2022, the available provision of Baht 389 million was shortfall over the minimum provisions by Baht 638 million. Therefore, the reserve of THB 710 million have been provided by using retained earnings.

Regulatory framework

The Bank calculates capital for prudential regulatory reporting based on BoT regulations with respect to the capital adequacy framework which in line with the Basel III framework of the Basel Committee ('Basel') as implemented in Thailand.

The Basel III framework is structured around three 'pillars': the Pillar 1 minimum capital requirements and Pillar 2 supervisory review process are complemented by the requirements in Pillar 3 on market discipline. The aim of Pillar 3 is to produce disclosures that allow market participants to assess the scope of application by banks of the Basel III framework and the rules in their jurisdiction, their capital resources, risk exposures and risk management processes, and hence their capital adequacy.

Pillar 3 requires all material risks to be disclosed to provide a comprehensive view of a bank's risk profile.

Pillar 3 disclosures

Our Pillar 3 Disclosures at 31 December2022 comprises both quantitative and qualitative information required under Pillar 3. The disclosures are made in accordance with Section 5.3.3 of the BoT's notification Re: Regulations on Capital Supervision for Commercial Banks. These disclosures are supplemented by additional requirements of the BoT regarding Liquidity Coverage Ratio ('LCR').

Frequency
We published comprehensive Pillar 3 Disclosures annually with an update of certain quantitative capital requirement disclosures, market risk information together with liquidity and funding risk, at the half year.

Media and location
The *Pillar 3 Disclosures 2022* on a standalone basis are available on our website: www.hsbc.co.th, whereas the Pillar 3 Disclosures 2022 of HSBC Holdings plc and its subsidiaries on a consolidated level and other information on HSBC are available on HSBC Group's website: www.hsbc.com.

Verification
Whilst the *Pillar 3 Disclosures 2022* are not required to be externally audited, the document has been appropriately verified internally in accordance with the Bank's policies on disclosure and its financial reporting and governance processes.

Scope of permissions

Credit risk
The Basel framework applies three approaches of increasing sophistication to the calculation of Pillar 1 credit risk capital requirements. The most basic level, the standardised approach ('SA'), requires banks to use external credit ratings to determine the risk weightings applied to rated counterparties. Other counterparties are grouped into broad categories and standardised risk weightings are applied to these categories.

The next level, the foundation internal ratings based ('FIRB') approach, allows banks to calculate their credit risk capital requirements on the basis of their internal assessment of a counterparty's probability of default ('PD'), but subjects their quantified estimates of exposure at default ('EAD') and loss given default ('LGD') to standard supervisory parameters. Finally, the advanced internal ratings based ('AIRB') approach allows banks to use their own internal assessment in determining PD and in quantifying EAD and LGD.

Counterparty credit risk (‘CCR’) in both the trading and non-trading books is the risk that the counterparty to a transaction may default before completing the satisfactory settlement of the transaction. Four approaches to calculating CCR and determining exposure values are defined by Basel: mark-to-market, original exposure, standardised and Internal Model Method (‘IMM’). These exposure values are used to determine capital requirements under one of the three approaches credit risk: standardised, FIRB or AIRB.

For credit risk including CCR, with the BoT’s approval, we have adopted the standardised approach. Internally, we use the mark-to-market and IMM approaches for managing and monitoring our CCR.

Market risk

Market risk capital requirements are calculated using a combination of standard rules and the internal models approach (‘IMA’). The latter involves the use of internal value at risk (‘VaR’) models to measure market risks and determine the appropriate capital requirement.

We have obtained approval from the BoT to apply a combined approach for market risk assessment to determine capital requirements. The standardised approach is used for Specific Interest Rate Risk and the Value at Risk model is used for general market, foreign exchange and interest rate risk.

Operational risk

Basel allows firms to calculate their operational risk capital requirement under the basic indicator approach, the standardised approach or the advanced measurement approach.

We currently use the standardised approach in determining our operational risk capital requirement.

Capital

Approach and policy

Our approach to capital management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment in which we operate.

It is our objective to maintain a strong capital base to support the development of our business and to exceed regulatory capital requirements at all times. To achieve this, we manage our capital within the context of an annual capital plan that is approved by the local Asset and Liability Management Committee ('ALCO') and determines the optimal amount and mix of capital required to support planned business growth and meet local regulatory capital requirements within the context of the Group capital plan. Capital generated by us in excess of planned requirements is returned to our Head Office, normally by way of profit remittance, in accordance with the Bank's capital plan.

Capital conservation buffer

To align with the Basel III framework, the BoT contemplates a capital conservation buffer ('CCB'). The CCB was designed to ensure banks build up capital outside periods of stress that can be drawn down when losses are incurred and is set at 2.5%. This is result in minimum capital ratio of 11%.

Composition of regulatory capital

The BoT has issued the notification to revise the components of regulatory capital. Items that do not reflect true capital are added to the regulatory adjustments to be applied to the regulatory capital i.e. goodwill, intangible assets, gains on sale related to securitisation transactions and significant investments in common shares and warrants to be in line with the Basel III framework.

At 31 December 2022, 30 June 2022 and 31 December 2021, we have an allocated and registered capital fund with the BoT of Baht 22,600 million. Intangible assets is the regulatory adjustment with immaterial to our regulatory capital. The detail can be summarised as follows:

Table 2 : Capital Structure

	31 December 2022 THBm	30 June 2022 THBm	31 December 2021 THBm
Assets maintained under Section 32	**24,078**	**23,348**	**23,690**
Sum of net capital for maintenance of assets under Section 32 and net balance of inter-office accounts			
Net funds brought in to maintenance assets under Section 32	22,600	22,600	22,600
Net balance of inter-office accounts where the branch is the debtor to the head office and other branches of the same juristic person, the parent company and subsidiaries of the head office	6,348	17,907	19,340
Total	**28,948**	**40,507**	**40,940**
Regulatory Capital	**22,600**	**22,600**	**22,600**
Regulatory Capital after deducting capital add-on from Single Lending Limit	**22,600**	**22,600**	**22,600**

Table 3 : Capital Adequacy

Minimum capital requirement for credit risk classified by type of assets under the Standardised Approach

	31 December 2022 THBm	30 June 2022 THBm	31 December 2021 THBm
Performing claims			
Claims on sovereigns and central banks, and multilateral development banks ('MDBs')	23	22	7
Claims on financial institutions, non-central government public sector entities ('PSEs') treated as claims on financial institutions, and securities firms	1,764	1,527	1,264
Claims on corporates, non-central government public sector entities ('PSEs') treated as claims on corporates	7,995	7,767	7,143
Claims on retail portfolios	11	10	11
Claims on housing loans	11	12	13
Other assets	28	22	26
Non-performing claims	-	1	-
Total minimum capital requirement for credit risk	**9,832**	**9,361**	**8,464**

Minimum capital requirement for market risk for positions in the trading book

	31 December 2022 THBm	30 June 2022 THBm	31 December 2021 THBm
Standardised approach - specific interest rate risk	1	2	3
Internal model approach	457	224	189
Total minimum capital requirement for market risk	**458**	**226**	**192**

Minimum capital requirement for operational risk

	31 December 2022 THBm	30 June 2022 THBm	31 December 2021 THBm
Standardised approach	1,020	976	966
Total minimum capital requirement for operational risk	**1,020**	**976**	**966**

Capital ratio

	31 December 2022 %	30 June 2022 %	31 December 2021 %
Total capital to risk-weighted assets	**16.9**	**18.2**	**19.9**
Total capital to risk-weighted assets after deducting capital add-on from Single Lending Limit	**16.9**	**18.2**	**19.9**
Minimum capital ratio including CCB according to the BoT	**11.0**	**11.0**	**11.0**

Risk exposure and assessment

Risk management framework and policies

Risk management framework

We aim to use a comprehensive risk management approach across the organisation and across all risk types, underpinned by our culture and values. This is outlined in our risk management framework, including the key principles and practices that we employ in managing material risks, both financial and non-financial. The framework fosters continuous monitoring of the risk environment and promotes risk awareness and a sound operational and strategic decision making and escalation process. It also ensures we have a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities, with clear accountabilities.

Culture

HSBC understands the importance of a strong culture. Our culture refers to our shared attitudes, beliefs, values and standards that shape behaviours including those related to risk awareness, risk taking and risk management. It is instrumental in aligning the behaviours of individuals with our attitude to assuming and managing risk, which helps to ensure that our risk profile remains in line with our risk appetite. The fostering of a strong culture is a key responsibility of our senior executives. Our culture is also reinforced by our approach to remuneration. Individual awards, including those for senior executives, are based on compliance with our values and the achievement of financial and non financial objectives which are aligned to our risk appetite and global strategy.

Risk Governance

HSBC Board has ultimate responsibility for the effective management of risk and approves our risk appetite. It is advised on risk-related matters by the Group Risk Committee (‘GRC’).

Executive accountability for the ongoing monitoring, assessment and management of the enterprise-wide risk environment, and the effectiveness of the risk management framework resides with the Group Chief Risk and Compliance Officer (‘GCRCO’). The GCRCO is supported by the Group Risk Management Meeting (‘GRMM’) of the Group Executive Committee (‘GEC’). In HSBC Thailand, Chief Risk Officer (‘CRO’) chairs Risk Management Meeting (‘RMM’).

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. These senior managers are supported by global functions. All our people have a role to play in risk management.

These roles are defined using the three lines of defence model, which takes into account our business and functional structures. We use a defined executive risk governance structure to ensure appropriate oversight and accountability for risk, which facilitates the reporting and escalation to the RMM.

Risk appetite

Risk appetite is a key component of our management of risk. It defines our desired forward-looking risk profile, and informs the strategic and financial planning process. At HSBC, risk appetite is managed through a global risk appetite framework and articulated in a risk appetite statement (‘RAS’), which is reviewed and approved by the Board, on the advice of the GRC, twice per year to make sure it remains fit for purpose. Our risk appetite provides an objective baseline to guide strategic decision making, helping to ensure that planned business activities provide an appropriate balance of return for the risk assumed, while remaining within acceptable risk levels. It is also integrated within other risk management tools, such as stress testing, to ensure consistency in risk management.

In HSBC Thailand, RAS is reviewed and approved by RMM.

Global Risk and Compliance function

We have a dedicated Global Risk and Compliance function, headed by the Group Chief Risk and Compliance Officer, which is responsible for the Group‘s risk management framework. This includes establishing global policy, monitoring risk profiles, and providing forward-looking risk identification and management capabilities. Global Risk and Compliance is made up of sub-functions covering both Financial and Non-financial risks. It is independent from the global businesses in order to provide challenge, appropriate oversight and balance in risk versus return decisions. The Global Risk and Compliance function operates in line with the three lines of defence model and plays an important role in reinforcing our culture and values. It focuses on creating an environment that encourages our people to speak up and do the right thing.

In Thailand Risk and Compliance function remains separate. Risk function is headed by Chief Risk Officer ('CRO') and Compliance function is headed by Chief Compliance Officer ('CCO').

Our material banking risks

The material risk types associated with our banking operations are described in the follows tables:

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	Credit risk arises principally from direct lending and trade finance but also from other products such as guarantees and derivatives.	Credit risk is: • **measured** as the amount that could be lost if a customer or counterparty fails to make repayments; • **monitored** using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and • **managed** through a robust risk control framework, which outlines clear and consistent policies, principles and guidance for risk managers.
Treasury risk		
Treasury risk is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural and transactional foreign exchange exposures and changes in market interest rates, together with pension and insurance risk.	Treasury risk arises from changes to the respective resources and risk profiles driven by customer behavior, management decisions or the external environment.	Treasury risk is: • **measured** through risk appetite and more granular limits, set to provide an early warning of increasing risk, minimum ratios of relevant regulatory metrics, and metrics to monitor the key risk drivers impacting treasury resources; • **monitored** and projected against appetites and by using operating plans based on strategic objectives together with stress and scenario testing; and • **managed** through control of resources in conjunction with risk profiles, strategic objectives and cash flows.
Market risk		
Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: • trading portfolios; and • non-trading portfolios.	Market risk is: • **measured** using sensitivities, value at risk and stress testing, giving a detailed picture of potential gains and losses for a range of market movements and scenarios, as well as tail risks over specified time horizons; • **monitored** using value at risk, stress testing and other measures, including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and • **managed** using risk limits approved by the Regional Market Risk Manager, the risk management meeting in various global businesses.

Risks	Arising from	Measurement, monitoring and management of risk
Climate risk		
Climate risk relates to the financial and non-financial impacts that may arise as a result of climate change and the move to a greener economy.	Climate risk can materialise through. • physical risk, which arises from the increased frequency and severity of weather events; • transition risk, which arises from the process of moving to a lowcarbon economy; and • greenwashing risk, which arises from the act of knowingly or unknowingly misleading stakeholders regarding our strategy relating to climate, the climate impact/benefits of a product or service, or the climate commitments or performance of our customers.	Climate risk is: • **measured** using a variety of risk appetite metrics and key management indicators, which assess the impact of climate risk across the risk taxonomy; • **monitored** using stress test; and • **managed** through adherence to risk appetite thresholds and via specific policies. These are managed at Global and Regional level.
Resilience risk		
Resilience risk is the risk of sustained and significant business disruption from execution, delivery, physical security or safety events, causing the inability to provide critical services to our customers, affiliates, and counterparties.	Resilience risk arises from failures or inadequacies in processes, people, systems or external events.	Resilience risk is: • **measured** using a range of metrics with defined maximum acceptable impact tolerances, and against our agreed risk appetite; • **monitored** through oversight of enterprise processes, risks, controls and strategic change programmes; and • **managed** by continual monitoring and thematic reviews.
Regulatory compliance risk		
Regulatory Compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching related financial services regulatory standards.	Regulatory compliance risk arises from the failure to observe relevant laws, codes, rules and regulations and can manifest itself in poor market or customer outcomes and lead to fines, penalties and reputational damage to our business.	Regulatory compliance risk is: • **measured** by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our regulatory compliance team; • **monitored** against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • **managed** by establishing and communicating appropriate policies and procedures, training employees in them and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
Financial crime risk		
Financial crime risk is the risk that HSBC's products and services will be exploited for criminal activity. This includes fraud, bribery and corruption, tax evasion, sanctions and export control violations, money laundering, terrorist financing and proliferation financing.	Financial crime risk arises from day-to-day banking operations involving customers, third parties and employees.	Financial crime risk is: • **measured** by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement of, and assessment by, our compliance teams; • **monitored** against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • **managed** by establishing and communicating appropriate policies and procedures, training employees in them and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.

Risks	Arising from	Measurement, monitoring and management of risk
Model risk		
Model Risk is the risk of inappropriate or incorrect business decisions arising from the use of models that have been inadequately designed, implemented or used, or from models that do not perform in line with expectations and predictions.	Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.	Model risk is: • **measured** by reference to model performance tracking and the output of detailed technical reviews, with key metrics including model review statuses and findings; • **monitored** against model risk appetite statements, insight from the independent review function, feedback from internal and external audits, and regulatory reviews; and • **managed** by creating and communicating appropriate policies, procedures and guidance, training colleagues in their application, and supervising their adoption to ensure operational effectiveness.

Pillar 2 and ICAAP

Pillar 2

We conduct an Internal Capital Adequacy Assessment Process ('ICAAP') to determine a forward-looking assessment of our capital requirements given our business strategy, risk profile, risk appetite and capital plan. The process incorporates the Group's risk management processes and governance framework. Our base capital plan undergoes stress testing. This, coupled with other risk management practices, is used to assess our internal capital adequacy requirements and inform our view of our internal capital planning buffer. The ICAAP is formally approved by the local ALCO, which has the ultimate responsibility for the effective management of asset and liability allocation and capital plan to achieve the Bank's strategic objectives and risk appetite.

Internal capital adequacy assessment

The ICAAP reflects how the Bank manages its capital and ensures that the Bank's capital position:

- Exceeds the minimum regulatory capital requirements as prescribed by the Bank of Thailand ('BoT');
- Remains sufficient to support BKH's risk appetite and business strategies;
- Remains sufficient to support the projected risk profile; and
- Remains sufficient to sustain business growth during normal and adverse business or economic conditions.

The ICAAP is examined by the BoT as part of its supervisory review and evaluation process. This examination informs the regulator's view of our Pillar 2 capital requirements.

Preserving our strong capital position remains a priority, and the level of integration of our risk and capital management helps to optimise our response to business demand for regulatory capital.

Credit risk

Overview and objective

Credit risk represents our largest regulatory capital requirement. This includes a capital requirement for counterparty credit risk in the banking and trading books. The principal objectives of our credit risk management function are:

- to maintain a strong culture of responsible lending and a robust credit risk policy and control framework;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our credit risk appetite under actual and stress scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

Credit risk management

The Bank adopts Internal Ratings Based Approach ('IRB') in managing our portfolio.

To assess our wholesale customer's credit risk, HSBC uses a two-dimensional architecture that separately assesses the risk of customer default (Probability of Default or 'PD') and the likely loss in the event of default (Loss Given Default or 'LGD').

PD is defined as the probability that the obligor defaults in respect of the exposure over a one-year period, irrespective of the term of facilities, whereas LGD measures the average loss that would be sustained on each facility owed by a customer, in percentage terms compared to the expected exposure at the time of default (Exposure at Default or 'EAD'). PD, LGD and EAD are used to calculate both Expected Credit Loss ('ECL') the International Financial Reporting Standard ('IFRS') 9 Financial Instruments and Risk-Weighted Assets ('RWA') under IRB.

PD is derived from Customer Risk Rating ('CRR') which is assigned based on customer financial statements and market data analysis, as well as qualitative elements and a final subjective overlay to better reflect any idiosyncratic elements of the customer's risk profile. CRR scale comprises 10 risk bands that further branch out to 23 risk buckets for IRB portfolios.

In term of provision, HSBC adopted the IFRS 9 on 1 January 2018 while HSBC Thailand adopted the same on 1 January 2020.

Under IFRS 9, financial assets are allocated into appropriate stages before ECL calculations are performed.

<u>Stage Allocation and ECL Measurement</u>
Stage 1: These financial assets are unimpaired and without a significant increase in credit risk. A 12-month allowance for ECL is recognised.

Stage 2: A significant increase in credit risk has been experienced on these financial assets since initial recognition. A lifetime ECL is recognised.

Stage 3: There is objective evidence of impairment and the financial assets are therefore considered to be in default or otherwise credit impaired. A lifetime ECL is recognised.

Further information on accounting policies for impairment of financial assets is set out on page 16 of the Annual financial statements 2022.

While the Bank uses IRB in management our credit risk, we use the Standardised Approach to calculate capital requirement for credit risks for the BoT's regulatory reporting purposes.

The following tables set out credit risk exposure value according to regulatory requirement at 31 December 2022 and 2021.

Credit risk

General information on credit risk exposure

Table 4 : Credit risk exposure of significant on-balance sheet and off-balance sheet exposures before recognised credit risk mitigation at 31 December 2022 and 2021

	31 December 2022		31 December 2021	
	Average exposure value THBm	Exposure value THBm	Average exposure value THBm	Exposure value THBm
On-balance sheet				
Loans and accrued interest receivables, net	130,682	138,920	121,913	129,630
Investments in debt securities, net	57,618	51,443	48,841	54,193
Deposits and accrued interest receivables, net	2,440	3,808	2,765	2,700
Derivative assets	41,449	38,648	38,048	32,581
Total	**232,189**	**232,819**	**211,567**	**219,104**
Off-balance sheet				
Aval, guarantees and letter of credit	44,292	45,480	39,974	41,639
OTC derivatives	2,018,948	2,112,954	2,041,129	2,160,291
Undrawn commitment	81,717	89,116	86,811	83,396
Total	**2,144,957**	**2,247,550**	**2,167,914**	**2,285,326**

Remark:

- *Loans represent loans to customers and interbank and money market placements including accrued interest receivables and net of deferred revenue and allowance for expected credit losses.*
- *Investments in debt securities are measured at amortised cost and measured at fair value through other comprehensive income excluding accrued interest receivables and net of allowance for expected credit losses.*
- *Deposit including accrued interest receivables and net of allowance for expected credit losses.*
- *Off-balance sheet represents the notional amounts before the application of a credit conversion factor.*

Table 5: Credit risk exposure of significant on-balance sheet and off-balance sheet exposures before recognised credit risk mitigation – analysis by country or geographical area at 31 December 2022 and 2021

Exposure values are allocated to region based on the country of incorporation where the exposure was originated.

31 December 2022

	On-balance sheet					Off-balance sheet			
Country or geographical area	**Total THBm**	**Loans and accrued interest receivables, net THBm**	**Investments in debt securities, net THBm**	**Deposits and accrued interest receivables, net THBm**	**Derivative assets THBm**	**Total THBm**	**Aval, guarantees and letter of credit THBm**	**OTC derivatives THBm**	**Undrawn commitment THBm**
Thailand	198,485	134,018	51,443	1,701	11,323	998,095	28,623	883,950	85,522
Asia Pacific (excluding Thailand)	23,684	330	-	25	23,329	713,979	7,187	703,305	3,487
North America and Latin America	2,638	26	-	11	2,601	295,102	5,973	289,125	4
Africa and Middle East	-	-	-	-	-	396	396	-	-
Europe	8,012	4,546	-	2,071	1,395	239,978	3,301	236,574	103
Total	**232,819**	**138,920**	**51,443**	**3,808**	**38,648**	**2,247,550**	**45,480**	**2,112,954**	**89,116**

31 December 2021

	On-balance sheet					Off-balance sheet			
Country or geographical area	**Total THBm**	**Loans and accrued interest receivables, net THBm**	**Investments in debt securities THBm**	**Deposits and accrued interest receivables THBm**	**Derivative assets THBm**	**Total THBm**	**Aval, guarantees and letter of credit THBm**	**OTC derivatives THBm**	**Undrawn commitment THBm**
Thailand	198,798	128,273	54,193	616	15,716	1,064,536	27,113	957,883	79,540
Asia Pacific (excluding Thailand)	12,817	100	-	12	12,705	892,698	6,597	885,381	720
North America and Latin America	2,991	-	-	15	2,976	221,220	6,054	213,649	1,517
Africa and Middle East	1,103	1,102	-	1	-	20	20	-	-
Europe	3,395	155	-	2,056	1,184	106,852	1,855	103,378	1,619
Total	**219,104**	**129,630**	**54,193**	**2,700**	**32,581**	**2,285,326**	**41,639**	**2,160,291**	**83,396**

Table 6 : Credit risk exposure of significant on-balance sheet and off-balance sheet exposures before recognised credit risk mitigation – analysis by residual maturity at 31 December 2022 and 2021

	31 December 2022			31 December 2021		
	Less than 1 year THBm	**Over 1 year THBm**	**Total THBm**	**Less than 1 year THBm**	**Over 1 year THBm**	**Total THBm**
On-balance sheet						
Loans and accrued interest receivables, net	115,887	23,033	138,920	107,770	21,860	129,630
Investments in debt securities, net	37,933	13,510	51,443	39,605	14,588	54,193
Deposits and accrued interest receivables, net	3,808	-	3,808	2,700	-	2,700
Derivative assets	10,253	28,395	38,648	8,082	24,499	32,581
Total	**167,881**	**64,938**	**232,819**	**158,157**	**60,947**	**219,104**
Off-balance sheet						
Aval, guarantees and letter of credit	42,265	3,215	45,480	38,685	2,954	41,639
OTC derivatives	980,736	1,132,218	2,112,954	855,342	1,304,949	2,160,291
Undrawn commitment	86,932	2,184	89,116	79,460	3,936	83,396
Total	**1,109,933**	**1,137,617**	**2,247,550**	**973,487**	**1,311,839**	**2,285,326**

Table 7 : Credit risk exposure of financial instruments before recognised credit risk mitigation and provisions at 31 December 2022 and 2021

	31 December 2022					
	Outstanding balance			Provisions		
	Defaulted exposures THBm	Non-defaulted exposures THBm	Expected credit losses accounting provisions THBm	General provisions THBm	Specific provisions for credit loss on SA THBm	Net values THBm
Loans and accrued interest receivables	86	138,936	102	376	86	138,560
Investments in debt securities, net	-	51,449	6	-	6	51,443
Deposits and accrued interest receivables	-	3,808	-	-	-	3,808
Commitment and financial guarantee	-	134,596	7	7	-	134,589
Total	**86**	**328,789**	**115**	**383**	**92**	**328,400**

	31 December 2021					
	Outstanding balance			Provisions		
	Defaulted exposures THBm	Non-defaulted exposures THBm	Expected credit losses accounting provisions THBm	General provisions THBm	Specific provisions for credit loss on SA THBm	Net values THBm
Loans and accrued interest receivables	-	129,672	42	582	-	129,090
Investments in debt securities, net	-	54,200	7	-	7	54,193
Deposits and accrued interest receivables	-	2,700	-	-	-	2,700
Commitment and financial guarantee	11	125,024	24	20	4	125,011
Total	**11**	**311,596**	**73**	**602**	**11**	**310,994**

Remark:

- *Outstanding balance of loans represent loans to customers and interbank and money market placements including accrued interest receivables and net of deferred revenue.*
- *Outstanding balance of investments in debt securities measured at amortised cost and measured at fair value through other comprehensive income excluding accrued interest receivables and net of allowance for expected credit losses.*
- *Outstanding balance of commitment and financial guarantee represents the notional amounts before the application of a credit conversion factor.*
- *Defaulted exposures refer to Stage 3 credit impaired financial instruments. While non-defaulted exposures refer to Stage 1 and Stage 2 or financial instruments with an insignificant increase in credit risk and financial instruments with a significant increase in credit risk, respectively according to the BoT notification No. 23/2561 dated 31 October 2018 Re: Classification and Provision of the Financial Institutions.*
- *Expected credit losses accounting provisions of loan classified under Stage 3 are treated as specific provisions for credit loss on standardised approach.*
- *Net values represented outstanding balance net of total provisions.*

Table 8: ***Outstanding loans including accrued interest receivables and investments in debt securities before recognised credit risk mitigation – analysis by country or geographical area and asset classification as prescribed by the Bank of Thailand at 31 December 2022 and 2021***

	31 December 2022				
	Loans and accrued interest receivables				**Investments in debt securities**
Country or geographic area	**Stage 1 THBm**	**Stage 2 THBm**	**Stage 3 THBm**	**Total THBm**	**Stage 1 THBm**
Thailand	121,494	12,540	86	134,120	51,443
Asia Pacific (excluding Thailand)	330	-	-	330	-
North America and Latin America	26	-	-	26	-
Africa and Middle East	-	-	-	-	-
Europe	4,546	-	-	4,546	-
Total	**126,396**	**12,540**	**86**	**139,022**	**51,443**

	31 December 2021				
	Loans and accrued interest receivables				**Investments in debt securities**
Country or geographic area	**Stage 1 THBm**	**Stage 2 THBm**	**Stage 3 THBm**	**Total THBm**	**Stage 1 THBm**
Thailand	119,029	9,279	-	128,308	54,193
Asia Pacific (excluding Thailand)	90	10	-	100	-
North America and Latin America	-	-	-	-	-
Africa and Middle East	-	1,109	-	1,109	-
Europe	155	-	-	155	-
Total	**119,274**	**10,398**	**-**	**129,672**	**54,193**

Remark:

- *Loans represent loans to customers, interbank and money market placements, including accrued interest receivables and net of deferred revenue.*
- *The classification of assets shown above is in accordance with the BoT notification No. 23/2561 dated 31 October 2018 Re: Classification and Provision of the Financial Institutions.*

Table 9: General provision, specific provision and bad debt written-off during the year against loans including accrued interest receivables and investments in debt securities – analysis by country or geographic area at 31 December 2022 and 2021

31 December 2022

Country or geographic area	Loans and accrued interest receivables: General provision THBm	Loans and accrued interest receivables: Specific provision THBm	Loans and accrued interest receivables: Bad debt written-off during the year THBm	Investments in debt securities: General provision THBm	Investments in debt securities: Specific provision THBm
Thailand		86	-		6
Asia Pacific (excluding Thailand)		-	-		-
North America and Latin America		-	-		-
Africa and Middle East		-	-		-
Europe		-	-		-
Total	**376**	**86**	**-**	**-**	**6**

31 December 2021

Country or geographic area	Loans and accrued interest receivables: General provision THBm	Loans and accrued interest receivables: Specific provision THBm	Loans and accrued interest receivables: Bad debt written-off during the year THBm	Investments in debt securities: General provision THBm	Investments in debt securities: Specific provision THBm
Thailand		-	-		7
Asia Pacific (excluding Thailand)		-	-		-
North America and Latin America		-	-		-
Africa and Middle East		-	-		-
Europe		-	-		-
Total	**582**	**-**	**-**	**-**	**7**

Remark:

- *General provision for loans and accrued interest receivables at 31 December 2022 was included provision in excess of allowance for expected credit losses by Baht 360 million (2021: Baht 540 million).*
- *Specific provision for investments in debt securities represent allowance for expected credit losses.*

Table 10 : Outstanding loans including accrued interest receivables before recognised credit risk mitigation – analysis by type of business and asset classification as prescribed by the Bank of Thailand at 31 December 2022 and 2021

	31 December 2022			
Type of business	**Stage 1 THBm**	**Stage 2 THBm**	**Stage 3 THBm**	**Total THBm**
Agriculture and mining	503	-	-	503
Financial sector	75,843	-	86	75,929
Manufacturing and commerce	41,183	10,139	-	51,322
Real estate business and construction	1,013	2	-	1,015
Public utilities and services	7,550	2,399	-	9,949
Housing loan	177	-	-	177
Others	127	-	-	127
Total	**126,396**	**12,540**	**86**	**139,022**

	31 December 2021			
Type of business	**Stage 1 THBm**	**Stage 2 THBm**	**Stage 3 THBm**	**Total THBm**
Agriculture and mining	1,172	-	-	1,172
Financial sector	69,385	2,028	-	71,413
Manufacturing and commerce	39,402	5,305	-	44,707
Real estate business and construction	911	30	-	941
Public utilities and services	8,070	3,035	-	11,105
Housing loan	204	-	-	204
Others	130	-	-	130
Total	**119,274**	**10,398**	**-**	**129,672**

Table 11 : General provision, specific provision and bad debt written-off during the year against loans including accrued interest receivables – analysis by type of business at 31 December 2022 and 2021

	31 December 2022		
Type of business	**General provision THBm**	**Specific provision THBm**	**Bad debt written-off during the year THBm**
Agriculture and mining	[redacted]	-	-
Financial sector	[redacted]	86	-
Manufacturing and commerce	[redacted]	-	-
Real estate business and construction	[redacted]	-	-
Public utilities and services	[redacted]	-	-
Housing loan	[redacted]	-	-
Others	[redacted]	-	-
Total	**376**	**86**	**-**

	31 December 2021		
Type of business	**General provision THBm**	**Specific provision THBm**	**Bad debt written-off during the year THBm**
Agriculture and mining	[redacted]	-	-
Financial sector	[redacted]	-	-
Manufacturing and commerce	[redacted]	-	-
Real estate business and construction	[redacted]	-	-
Public utilities and services	[redacted]	-	-
Housing loan	[redacted]	-	-
Others	[redacted]	-	-
Total	**582**	**-**	**-**

Table 12 : Reconciliation of the movement in the general provision and specific provision against loans including accrued interest receivables at 31 December 2022 and 2021

	31 December 2022		
	General provision THBm	**Specific provision THBm**	**Total THBm**
Provisions at the beginning of year	582	-	582
Provisions charge (reversal) during the year	(206)	86	(120)
Provisions at the end of year	**376**	**86**	**462**

	31 December 2021		
	General provision THBm	**Specific provision THBm**	**Total THBm**
Provisions at the beginning of year	740	48	788
Reversal of provisions during the year	(158)	(48)	(206)
Provisions at the end of year	**582**	**-**	**582**

Table 13 : Net exposure of on-balance sheet and credit equivalent amount of off-balance sheet before recognised credit risk mitigation classified by type of assets under the Standardised Approach at 31 December 2022 and 2021

	31 December 2022		
	On-balance sheet THBm	**Off-balance sheet THBm**	**Total THBm**
Performing claims			
Claims on sovereigns and central banks, and MDBs	44,317	296	44,613
Claims on financial institutions, PSEs treated as claims on financial institutions, and securities firms	20,947	91,528	112,475
Claims on corporate, PSEs treated as claims on corporate	74,279	31,237	105,516
Claims on retail portfolios	127	-	127
Claims on housing loans	177	-	177
Other assets	39,073	-	39,073
Non-performing claims	86	-	86
Total	**179,006**	**123,061**	**302,067**

	31 December 2021		
	On-balance sheet THBm	**Off-balance sheet THBm**	**Total THBm**
Performing claims			
Claims on sovereigns and central banks, and MDBs	49,004	240	49,244
Claims on financial institutions, PSEs treated as claims on financial institutions, and securities firms	14,634	91,578	106,212
Claims on corporate, PSEs treated as claims on corporate	61,709	29,505	91,214
Claims on retail portfolios	130	-	130
Claims on housing loans	203	-	203
Other assets	33,083	-	33,083
Non-performing claims	-	4	4
Total	**158,763**	**121,327**	**280,090**

Remark:

- *The above information has been presented net of specific provision.*
- *Off-balance sheet amounts have been adjusted by the credit conversion factor and also included repo style transactions.*

Ratings from External Credit Assessment Institutions

For RWA calculation, credit risk under the Standardised Approach has been calculated based on the external credit ratings from External Credit Assessment Institutions ('ECAI'). The Bank uses external credit ratings from the following ECAIs which are approved by the BoT.

- Standard & Poor's Ratings Service;
- Moody's Investors Services;
- Fitch Ratings;
- Fitch Ratings (Thailand);
- TRIS Rating

Data files of external ratings from the nominated ECAIs are matched with customer records in our centralised credit database.

When calculating the risk-weighted value of an exposure using ECAI risk assessments, risk systems identify the customer in question and look up the available ratings in the central database, according to the BoT's rating selection rules as prescribed in the appendix 4 of the BoT's guideline on Minimum Capital Requirement for Credit Risk under the Standardised Approach. The systems then apply the BoT's prescribed credit quality step mapping to derive from the rating the relevant risk weight.

Exposures to, or guaranteed by, central governments and Banks of Thailand and denominated in local currency are eligible under Standardised Approach for a 0% risk weighting.

Table 14 : Net exposure of on-balance sheet and credit equivalent amount of off-balance sheet after recognised credit risk mitigation for each type of assets, classified by risk weight under the Standardised Approach at 31 December 2022 and 2021

	31 December 2022										
	Net exposures after recognised credit risk mitigation – Rated					**Net exposures after recognised credit risk mitigation – Unrated**					
Risk weight	**0%**	**20%**	**50%**	**100%**	**150%**	**0%**	**20%**	**50%**	**35%**	**75%**	**100%**
	THBm	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**
Performing claims											
Claims on sovereigns and central banks, and MDBs	110,843	878	186	-	-						-
Claims on financial institutions, PSEs treated as claims on financial institutions, and securities firms	-	33,853	6,647	10,659	-						-
Claims on corporate, PSEs treated as claims on corporate	-	2,507	4,557	10,852	-						80,423
Claims on retail portfolios										-	127
Claims on housing loans									63	-	114
Other assets						39,051	4				850
Risk weight			**50%**	**100%**	**150%**					**75%**	
Non-performing claims			-	-	-					-	

	31 December 2021										
	Net exposures after recognised credit risk mitigation – Rated					Net exposures after recognised credit risk mitigation – Unrated					
Risk weight	**0%**	**20%**	**50%**	**100%**	**150%**	**0%**	**20%**	**50%**	**35%**	**75%**	**100%**
	THBm	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**	**THBm**
Performing claims											
Claims on sovereigns and central banks, and MDBs	117,559	-	166	-	-			-			-
Claims on financial institutions, PSEs treated as claims on financial institutions, and securities firms	-	24,959	5,850	6,920	20						-
Claims on corporate, PSEs treated as claims on corporate	-	1,882	4,397	6,013	-						75,445
Claims on retail portfolios										-	130
Claims on housing loans									77	-	126
Other assets						34,131	75				285
Risk weight			**50%**	**100%**	**150%**					**75%**	
Non-performing claims			-	-	4					-	

Remark: Off-balance sheet represents the notional amounts after applied credit conversion factor.

Credit risk mitigation

Mitigation of credit risk is a key aspect of effective risk management and takes many forms. Our general policy is to promote the use of credit risk mitigation, justified by commercial prudence and capital efficiency. Detailed policies cover the acceptability, structuring and terms with regard to the availability of credit risk mitigation such as in the form of collateral security. These policies, together with the setting of suitable valuation parameters, are subject to regular review to ensure that they are supported by empirical evidence and continue to fulfil their intended purpose.

Collateral
The most common method of mitigating credit risk is to take collateral. In the commercial and industrial sectors, charges are created over business assets such as premises, stock and debtors.

Financial collateral
In the institutional sector, trading facilities are supported by charges over financial instruments, such as cash, debt securities and equities. Financial collateral in the form of marketable securities is used in much of the Bank's derivatives activities and in securities financing transactions, such as repos and reverse repos. Netting is used extensively and is a prominent feature of market standard documentation.

In the non-trading book, we provide customers with working capital management products. In some cases, these products combine loans and advances to customers with customer accounts over which we have right of offset which comply with the regulatory requirements for on-balance sheet netting. Where this applies, the customer accounts are treated as cash collateral. For risk management purposes, the net amounts of such exposures are subject to limits and the relevant customer agreements are subject to review to ensure the legal right of offset remains appropriate.

Other forms of Credit Risk Mitigation
In our corporate lending, we also take guarantees from corporates. Corporates would normally provide guarantees as part of a parent/subsidiary or common parent relationship and would span a number of credit grades.

Policy and procedures
Policies and procedures govern the protection of our position from the outset of a customer relationship, for instance, in requiring standard terms and conditions or specifically agreed documentation permitting the offset of credit balances against debt obligations, and through controls over the integrity, current valuation and, if necessary, realisation of collateral security.

Valuing collateral
Valuation strategies are established to monitor collateral mitigants to ensure that they will continue to provide the anticipated secure secondary repayment source. The frequency of valuation increases with the volatility of the collateral. For market trading activities such as collateralised over-the-counter ('OTC') derivatives and securities financing transactions ('SFTs'), we typically carry out daily valuations.

For commercial real estate, Group policy requires an independent review of the valuation at least every three years, or more frequently as the need arises. Revaluations are sought where, for example, material concerns arise in relation to the performance of the collateral. Revaluation also occurs commonly in circumstances where an obligor's credit quality has declined sufficiently to cause concern that the principal payment source may not fully meet the obligation.

Recognition of risk mitigation
For banking book exposures, the simple approach is applied for financial collateral. Where credit risk mitigation is available in the form of an eligible guarantee, non-financial collateral or a credit derivative, the exposure is divided into covered and uncovered portions. The covered portion is determined after applying an appropriate 'haircut' for currency and maturity mismatches to the amount of the protection provided and attracts the risk weight of the protection provider. The uncovered portion attracts the risk weight of the obligor.

For trading book, the value of exposure fully or partially covered by eligible financial collateral is adjusted under the financial collateral comprehensive method using supervisory volatility adjustments (including those for currency mismatch) which are determined by the specific type of collateral (and its credit quality, in the case of eligible debt securities) and its liquidation period. The adjusted exposure value is subject to the risk weight of the obligor.

Table 15 : Exposure value under the Standardised Approach covered by collateral classified by type of assets and collateral at 31 December 2022 and 2021

	31 December 2022		31 December 2021	
	Eligible financial collateral THBm	**Guarantee and credit derivatives THBm**	**Eligible financial collateral THBm**	**Guarantee and credit derivatives THBm**
Performing claims				
Claims on financial institutions, PSEs treated as claims on financial institutions, and securities firms	57,109	6,964	65,079	5,595
Claims on corporate, PSEs treated as claims on corporate	4,350	4,550	1,199	4,315
Non-performing claims	-	-	-	-
Total	**61,459**	**11,514**	**66,278**	**9,910**

Market risk

Overview and objective

Market risk is the risk of movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.

Exposure to market risk is separated into two portfolios:

- Trading portfolios: these comprise positions held for client servicing and market-making, with the intention of short-term resale and/or to hedge risks resulting from such positions.
- Non-trading portfolios comprise positions that primarily arise from the interest rate management of our commercial banking assets and liabilities, financial investments designated as held-to-collect and sale and held-to-maturity.

Where appropriate, we apply similar risk management policies and measurement techniques to both trading and non-trading portfolios. Our objective is to manage and control market risk exposures in order to optimise return on risk while maintaining a market profile consistent within our established risk appetite.

Market risk governance

The management of market risk is principally undertaken in Markets and Securities Services ('MSS') using risk limits approved by the Regional Market Risk Manager, Regional RMM.

Market risk measures

We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

We use sensitivity measures to monitor the market risk positions within each asset class and risk type. Granular sensitivity limits are set for each trading desk taking into consideration market liquidity, customer demand and capital constraints amongst other factors.

Value at risk

Value at risk ('VaR') is a technique that estimates the potential mark-to-market losses in the trading and non-trading portfolios as a result of movements in market rates and prices over a specified time horizon and level of confidence. The use of VaR is an integral part of our market risk management framework and is calculated for a scope of trading and non-trading positions which is wider than the set of trading positions which are capitalised under a VaR treatment.

Our models are predominantly based on historical simulation. VaR is calculated at a 99% confidence level for a one-day holding period.

Our VaR model uses historical series of market rates and prices, implicitly taking into account inter-relationships between different markets and rates such as interest rates and foreign exchange rates.

We use the past two years as the historical data set in our VaR model and the scenarios are updated at least on a weekly basis. These scenarios are then applied to the market baselines and positions on a daily basis. The models incorporate the effect of option features on the underlying exposures.

The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR is used with awareness of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- The use of a 1-day holding period for risk management purposes of trading and non-trading books assumes that this short period is sufficient to hedge or liquidate all positions;
- the use of a 99 percent confidence level by definition does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated based on the outstanding exposures at close of business and therefore does not necessarily reflect intra-day exposures.

Back-testing

We validate daily the accuracy of our VaR model by back-testing the model against both actual and hypothetical profit and loss. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions. The number of hypothetical loss back-testing exceptions, together with a number of other indicators, is used to assess model performance and to consider whether enhanced internal monitoring of a VaR model is required.

According to BoT notification No. 94/2551 dated 27 November 2008 Re: Guideline on Supervision of Market Risk and Capital Requirement for Market Risk of Financial Institutions, VaR back-testing exceptions, on Hypothetical loss, are counted towards the multiplier determined by the BoT for the purposes of the capital requirement calculation for market risk. The multiplier will increase if there are 5 or more loss exception in a 250-day period.

Stress testing

Stress testing is an integral part of our market risk management framework which is used to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be greater than those predicted by VaR modelling.

Stress testing is implemented at legal entity, regional and overall Group levels. A set of scenarios is used consistently across all regions within the Group. The risk appetite around potential stress losses for the Group is set and monitored against referral limits.

In addition to Group's stress testing scenarios, we also perform stress testing using the scenarios as specified by the BoT, covering parallel and non-parallel shifts in interest rate yield curves and depreciation and appreciation in major currencies.

Managed risk positions

Interest rate risk

Interest rate risk arises within the trading portfolios, principally from mismatches, as a result of interest rate changes, between the future yield on assets and their funding cost.

Risk arising from changes in the level of interest rates that may impact prices of interest rate sensitive assets such as interest rate swaps.

This is measured, where practical, on a daily basis. We use a range of tools to monitor and control interest rate risk exposures. These include the present value of a basis point movement in interest rates, VaR, stress testing and sensitivity analysis.

Through our management of market risk in non-trading portfolios, we mitigate the effect of prospective interest rate movements that could reduce future net interest income, while balancing the cost of such hedging activities on the current net revenue stream.

Foreign exchange risk

Foreign exchange risk arises from movements in the relative value of currencies and volatilities. In addition to VaR and stress testing, we control the foreign exchange risk within the trading portfolio by limiting the open exposure to individual currencies, and on an aggregate basis.

Specific issuer risk

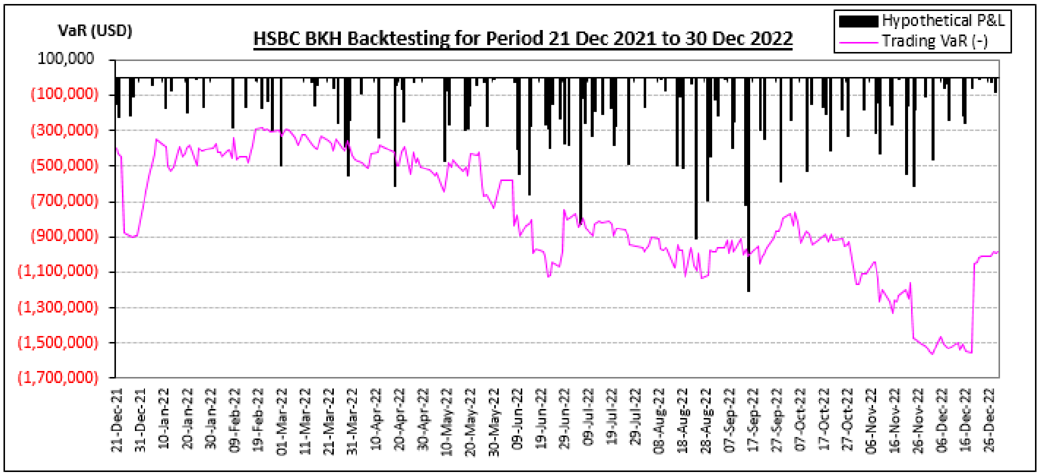
Specific issuer risk arises from changes in the level of credit spreads that may impact prices of credit spread sensitive assets. As well as through VaR and stress testing, we manage the exposure to credit spread movements within the trading portfolios with limits referenced to the sensitivity of the present value of a basis point movement in credit spreads.

Table 16 : Market risk information by Internal Model Approach at 31 December 2022, 30 June 2022 and 31 December 2021

	31 December 2022 THBm	30 June 2022 THBm	31 December 2021 THBm
Interest Rate Risk			
Maximum VaR during the period	171	128	93
Average VaR during the period	127	70	59
Minimum VaR during the period	81	41	37
VaR at the end of the period	107	89	47
Foreign Exchange Rate Risk			
Maximum VaR during the period	26	40	36
Average VaR during the period	4	14	7
Minimum VaR during the period	1	3	2
VaR at the end of the period	3	3	9
Total Market Risk			
Maximum VaR during the period	171	125	95
Average VaR during the period	127	70	58
Minimum VaR during the period	84	40	37
VaR at the end of the period	107	90	58

Remark: The period for Maximum VaR, Minimum VaR and Average VaR is 60 days interval. All figures are based on 10 days VaR as used for market risk capital charge calculation.

Table 17 : Back-testing result (considering loss side of Hypothetical P&L vs. Value at Risk)



Remark: There were five exceptions from VaR backtesting, on Hypothetical loss for the period 21 December 2021 to 30 December 2022. The exceptions were occurred on P&L dated 2 March 2022, 30 March 2022, 19 April 2022, 7 July 2022 and 16 September 2022.

Interest rate risk in the banking book

Overview

Interest rate risk in the banking book ('IRRBB') is the risk of an adverse impact to earnings or capital due to changes in market interest rates. It is generated by our non-traded assets and liabilities, specifically loans, deposits and financial instruments that are not held for trading intent or in order to hedge positions held with trading intent. Interest rate risk in the banking book is transferred to and managed by Markets Treasury, under the supervision of the local ALCO.

Governance and structure

Asset, Liability and Capital Management ('ALCM') monitors interest rate risk in banking book. This includes reviewing and challenging the business on the interest rate risk management impacts prior to the release of new products and in respect of proposed behavioural assumptions used for hedging activities. The ALCM function is responsible for maintaining and updating the transfer pricing framework, informing the ALCO of the overall banking book interest rate risk exposure and managing the balance sheet in conjunction with Markets Treasury.

All interest rate risk must be identified, measured, monitored, managed and controlled within limits. ALCM and Markets Treasury are subject to independent oversight and challenge from Treasury Risk.

The banking book Interest rate risk that can be economically hedged are transferred to the Markets Treasury business to manage within the Market Risk limits approved by RMM. Hedging is generally executed through interest rate derivatives or fixed-rate government bonds. Any interest rate risk that Markets Treasury cannot economically hedge is not transferred and will remain within the global business where the risks originate.

Measurement of interest rate risk in the banking book

The table below sets out the effect on future net income of an incremental 100 basis points parallel rise in yield curves during the 12 months.

Table 18 : The effect of changes in interest rates to net interest income in the banking book at 31 December 2022 and 2021

	Effect to net income	
	2022	**2021**
Currency	**THBm**	**THBm**
Baht	144	233
US Dollar	8	(118)
Others	(4)	4
Total effect of changes in interest rates to net interest income	**148**	**119**
Percentage of net effect to net future interest income	**7.5%**	**6.2%**

Equity exposures in the banking book

At 31 December 2022 and 2021, there is no equity investments.

Details of the Bank's accounting policy for investments may be found on page 12, of the *Annual financial statements 2022*.

Operational risk

Overview and objective

Operational risk or now called non-financial risk. Non-financial risk is the risk of loss resulting from people, inadequate or failed internal processes, data or systems, or external events. Sound non-financial risk management is central to achieving good outcomes for our customers.

Non-financial risk is relevant to every aspect of our business and is broadly managed through the risk management framework ('RMF'). Non-financial risk covers a wide spectrum of areas, i.e. resilience risk, financial crime and fraud, regulatory compliance, financial reporting and tax risk, legal risk, model risk and people risk.

Losses arising from breaches of regulation and law, unauthorised activities, error, omission, inefficiency, fraud, systems failure or external events all fall within the definition of non-financial risk.

The objective of our operational risk management is to manage and control operational risk in a cost-effective manner and within our risk appetite, as defined by Group Management Board ('GMB').

Organisation and responsibilities

Responsibility for managing non-financial risk lies with our people. HSBC remains focused on strengthening our approach to managing non-financial risk. The RMF sets out our approach to governance and risk appetite and sets the principals for our management of non-financial risks and associated controls.

Progress has been made in enhancing the framework and tools for strengthening the control environment and we will continue to improve practices in the management of non-financial risk.

Operational and Resilience Risk ('ORR') function is a combined risk stewardship and oversight function, which provides robust non-financial risk steward oversight of the management of risk by the Group businesses, functions and legal entities. ORR supports the business to grow safely and ensures governance and management of Operational and Resilience Risk through the delivery and embedding of effective frameworks and policies, and continuous oversight and assurance of risks, controls, events and impacts.

The effectiveness of first line of defence risk and control owners, and second line of defence risk stewards in managing our Non-Financial Risk processes and practices is reported through Risk Management Meetings ('RMMs').

Measurement and monitoring

The RMF is set out as a high-level standard, supplemented by identifying, assessing, monitoring and controlling non-financial risk, and give guidance on mitigating actions to be taken when weaknesses are identified.

In order to drive risk awareness in a more forward looking manner, we form our risk appetite to ensure that our risks can be properly managed and regularly monitor non-financial risk exposure against that risk appetite. This assists Management in managing the risks.

Each businesses are responsible for maintaining an appropriate level of internal control, commensurate with the scale and nature of operations. They are responsible for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The RMF supports businesses to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

Risk and control assessment approach

Non-financial risk and control assessments are performed by the first line of defence. The risk and control assessment process is designed to provide the first line of defence with a view of non-financial risks, an assessment of the effectiveness of controls, and a tracking mechanism for action plans so that they can proactively manage non-financial risks within acceptable levels. Appropriate means of mitigation and controls are considered. These include making specific changes to strengthen the internal control environment, and investigating whether cost-effective insurance cover is available to mitigate the risk.

Recording

We use a Group-wide risk management system to record the results of our non-financial risk management process. Non-financial risk and control assessments, as described above, are input and maintained by the first line of defence. The first line of defence monitors and follows up the progress of documented action plans. Material Operational losses are entered into the Group-wide risk management system and reported to governance on a monthly basis.

Liquidity and funding risk

Overview

Liquidity risk is the risk that the bank does not have sufficient financial resources to meet its obligations when they fall due. The liquidity risk arises from mismatches in the timing of cashflows. Funding risk is the risk that we cannot raise funding or can only do so at excessive cost.

Liquidity and funding risk management

HSBC has comprehensive policies, metrics and controls, which aims to allow us to withstand severe but plausible liquidity stresses. The HSBC Group manages liquidity and funding risk at an operating entity level to make sure that obligations can be met in the jurisdiction where they fall due, generally without reliance on other parts of the group.

Liquidity and Funding Risk management processes include:

- maintaining compliance with relevant regulatory requirements;
- projecting cash flows under various stress scenarios and considering the level of liquid assets necessary in relation thereto;
- monitoring liquidity and funding ratios against internal and regulatory limits;
- maintaining a diverse range of funding sources with adequate back-up facilities;
- managing the concentration and profile of term funding;
- managing contingent liquidity commitment exposures within limits;
- maintaining debt financing plans;
- monitoring of depositor concentration in order to avoid undue reliance on large individual depositors and ensuring a satisfactory overall funding mix; and
- maintaining liquidity and funding contingency plans.

Governance

The elements of liquidity and funding risk management framework are underpinned by a robust governance framework, with the two major elements being:

- the Asset and Liability Management Committees (‘ALCOs’); and
- the annual internal liquidity adequacy assessment process (‘ILAAP’) used to validate risk tolerance and set risk appetite.

The local ALCO is responsible for managing all ALCM issues including liquidity and funding risk management and also monitors the compliance with liquidity and funding requirements.

Asset, Liability and Capital Management (‘ALCM’) team is responsible for the application of the liquidity and funding risk management framework at a local operating entity level and assists ALCO to review liquidity and funding risks to ensure their prudent management.

ALCM manages the balance sheet with a view to achieve efficient allocation and utilization of all resources.

The Markets Treasury team, within Markets and Securities Services (‘MSS’) is responsible for managing cash, short-term liquidity and funding for the entity. This includes deployment of the commercial surplus as well as accessing wholesale senior funding markets if needed.

Treasury Risk Management carry out independent review, challenge and assurance of the appropriateness of the risk management activities undertaken by ALCM and Markets Treasury. They provide oversight and stewardship of liquidity and funding management including setting policy and control standards.

Global Internal Audit provide independent assurance that risk is managed effectively across the Group.

Internal liquidity adequacy assessment process ('ILAAP') and risk appetite

The operating entities are required to meet internal minimum requirements and any applicable regulatory requirements at all times. These requirements are assessed through the Internal Liquidity Adequacy Assessment Process ('ILAAP'), which ensures that operating entities have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity and funding risk over an appropriate set of time horizons, including intra-day. The ILAAP informs the validation of risk tolerance and the setting of risk appetite. It also assesses the capability to manage liquidity and funding effectively in each operating entity. These metrics are set and managed locally but are subject to robust global review and challenge to ensure consistency of approach and application of the Group's policies and controls.

All operating entities are required to prepare an ILAAP document at appropriate frequency. Compliance with liquidity and funding requirements is monitored and reported to ALCO, RMM and on a regular basis.

Management of liquidity and funding risk

The Bank level risk appetite measures are the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR'), supplementing by HSBC Internal Liquidity Metric ('ILM'). In addition, an appropriate funding and liquidity profile is managed through a wider set of measures:

- a minimum LCR requirement;
- a minimum NSFR requirement;
- an internal liquidity metric ('ILM')
- a minimum LCR requirement by material currency;
- a depositor concentration limit;
- the cumulative term funding maturity concentration limit;
- a management and monitoring of intraday liquidity;
- the application of liquidity funds transfer pricing; and
- forward-looking funding assessments.

Liquidity and funding risk metrics are monitored daily and/or monthly and reported to ALCO regularly.

Measurement and monitoring

BoT issued a Notification Re: Guidelines on Liquidity Coverage Ratio ('LCR'), where commercial banks are required to maintain High Quality Liquid Assets ('HQLA') relative to net cash outflows within the 30-day time horizon under liquidity stress scenarios of at least 100% from 1 January 2020.

The Bank manages its LCR position daily within the internal appetite limit which includes a buffer in excess of the regulatory requirement. The Bank actively considers the impact of business decisions on the LCR.

In addition, the Bank maintains a diversified funding base with projections of balance sheet and NSFR discussed in monthly ALCO meetings to ensure the Bank remains well-funded to support the business strategy. The Bank regularly examines its liquidity gaps and introduced the internal metrics on funding concentration to monitor funding risks.

Also, the Bank maintain the liquidity contingency plans that can be enacted in the event of internal or external triggers, which threaten the liquidity or funding position. The contingency plans set out a range of appropriate management actions, which could feasibly be executed in a stressed environment to recover the position.

Liquidity coverage ratio disclosure

Table 19 and table 20 set out the disclosure items under the LCR disclosure standard template as specified by the BoT.

The average value of the LCR and related components is calculated by the simple average method, which is the average of three data points (month-end data) over a particular quarter.

Explanations of the LCR disclosure template can be found in the Glossary section.

Further details of the Group's liquidity and funding risk management and disclosures can be viewed in the Annual Report and Accounts 2022 and the Pillar 3 Disclosure at 31 December 2022, which is available on HSBC Group's website: www.hsbc.com, under Investors section.

Table 19 : Liquidity coverage ratio

	Average Balance 2022 Quarter 4	Average Balance 2021 Quarter 4
(1) Total high-quality liquid assets (THBm)	93,530	102,388
(2) Total net cash outflows within the 30-day time horizon (THBm)	47,075	58,288
(3) Percentage of Liquidity Coverage Ratio (%)	**199**	**176**
Minimum percentage of LCR as specified by the BoT (%)	**100**	**100**

Table 20 : Comparative data of LCR

	2022 Average LCR %	2021 Average LCR %
Quarter 3	191	178
Quarter 4	199	176

The Bank maintains a healthy liquidity position with the average LCR for the 4th quarter of 2022 of 199%, which is 99% higher than the minimum LCR requirement as specified by the BoT. This LCR is the average of LCRs as at the end of October – 189%, November – 195% and December – 214%. The LCR consists of 2 main components;

1. HQLA include unencumbered high-quality assets with low risk and low volatility that can be easily liquidated through sale or repurchase transactions without any significant changes to their values, even in times of liquidity stress. The value of each type of HQLA is after the application of both haircuts and any applicable caps as specified by the BoT.

   The average HQLA of the Bank for the 4th quarter of 2022 is Baht 93,530 million, which is the average of HQLA as at the end of October – December. 100% of the average HQLA included in the LCR are Level 1 assets as specified by the BoT, which consist mainly of cash and Baht denominated government and central bank debt securities. The Bank maintains a well-diversification of HQLA to support the regulatory and internal requirements.

2. The amount of net cash outflows is equal to expected cash outflows within the 30-day time horizon minus expected cash inflows within the 30-day time horizon under liquidity stress scenarios; but the expected cash inflows must not exceed 75% of the expected cash outflows.

   The average net cash outflows of the Bank for the 4th quarter of 2022 is Baht 47,075 million, which is the average of net cash outflows within the 30-day time horizon as at the end of October – December.

   The expected cash outflows on which the Bank focuses under the severe liquidity stress scenarios are the run-off of unsecured wholesales deposits and borrowings, repayments of secured borrowings under repurchase agreements (repos), derivative cash outflows to which the specified BoT run-off rates applied. The cash outflows arising from contingent funding, obligations and collateral requirements such repo funding and derivatives are also captured with the run-off rate assigned by the BoT.

   The expected cash inflows are majority from performing customer's loan repayments, maturing deposits placement and derivative cash inflows, to which the specified BoT inflow rates applied.

Abbreviation	Brief description
A	
ALCM	Asset, Liability and Capital Management
ALCO	Asset and Liability Management Committee
AIRB	Advanced Internal Ratings Based Approach
B	
Bank	The Hongkong and Shanghai Banking Corporation Limited, Bangkok Branch
BoT	The Bank of Thailand
C	
CCB	Capital Conservation Buffer
CCR	Counterparty Credit Risk
CCO	Chief Compliance Officer
CRO	Chief Risk Officer
CRR	Customer Risk Rating
E	
EAD	Exposure at Default
ECAI	External Credit Assessment Institutions
ECL	Expected Credit Losses
F	
FIRB	Foundation Internal Ratings Based Approach
G	
GCRCO	Group Chief Risk and Compliance Officer
GEC	Group Executive Committee
GMB	Group Management Board
GRC	Group Risk Committee
GRMM	Group Risk Management Meeting
Group	HSBC Holdings together with its subsidiary undertakings
H	
HQLA	High-Quality Liquid Assets
HSBC	HSBC Holdings together with its subsidiary undertakings
I	
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standard
ILAAP	Internal Liquidity Adequacy Assessment Process
ILM	Internal Liquidity Metric
IMA	Internal Models Approach
IMM	Internal Model Method
IRB	Internal Ratings Based Approach
IRRBB	Interest Rate Risk in the Banking Book
L	
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
M	
MDB	Multilateral Development Bank
MSS	Markets and Securities Services
N	
NSFR	Net Stable Funding Ratio

Abbreviations (continued)

Abbreviation	Brief description
O	
OTC	Over-the-Counter
P	
PD	Probability of Default
PSE	Public Sector Entities
R	
RMF	Risk Management Framework
RMM	Risk Management Meeting
RWA	Risk-Weighted Asset
S	
SA	Standardised Approach
SFT	Securities Financing Transactions
T	
TFRS	Thai Financial Reporting Standard
V	
VaR	Value at Risk

Term	Definition
B	
Back-testing	A statistical technique used to monitor and assess the accuracy of a model, and how that model would have performed had it been applied in the past.
Basel II	The capital adequacy framework issued by the Basel Committee on Banking Supervision in June 2006 in the form of the 'International Convergence of Capital Measurement and Capital Standards', amended by subsequent changes to the capital requirements for market risk and re-securitisations, commonly known as Basel 2.5, which took effect from 31 December 2011.
Basel III	In December 2010, the Basel Committee issued 'Basel III rules: a global regulatory framework for more resilient banks and banking systems' and 'International framework for liquidity risk measurement, standards and monitoring'. Together, these documents present the Basel Committee's reforms to strengthen global capital and liquidity rules with the goal of promoting a more resilient banking sector.
Basis point ('bps')	One hundredth of a per cent (0.01%), so 100 basis points is 1%. For example, this is used in quoting movements in interest rates or yields on securities.
C	
Capital conservation buffer ('CCB')	A capital buffer designed to ensure banks build up capital buffers outside periods of stress that can be drawn down as losses are incurred. Should a bank's capital levels fall within the capital conservation buffer range, capital distributions will be constrained by the regulators.
Compliance risk	The risk that the Bank fails to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incurs fines and penalties and suffers damage to its business as a consequence.
Counterparty credit risk	Counterparty credit risk is the risk that the counterparty to a transaction may default before completing the satisfactory settlement of the transaction.
Credit quality step	A step in the Bank of Thailand credit quality assessment scale which is based on the credit ratings of ECAIs. It is used to assign risk weights under the standardised approach.
Credit risk	The risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. It arises principally from direct lending and trade finance business but also from other products such as guarantees, credit derivatives and from holding assets in the form of debt securities.
Credit risk mitigation	A technique to reduce the credit risk associated with an exposure by application of credit risk mitigants, such as collateral, guarantee and credit derivatives.

Term	Definition
D	
Debt securities	Financial assets on the Bank's balance sheet representing certificates of indebtedness of credit institutions, public bodies or other undertakings.
E	
Expected credit losses ('ECL')	In the income statement, ECL is recorded as a change in expected credit losses and other credit impairment charges. In the balance sheet, ECL is recorded as an allowance for financial instruments to which only the impairment requirements in IFRS 9 are applied.
12-month ECL	The ECL resulting from default events that are possible within the next 12 months.
Lifetime ECL	The expected credit losses that result from all possible default events over the expected life of a financial instrument.
Exposure	A claim, contingent claim or position which carries a risk of financial loss.
Exposure at default ('EAD')	The amount expected to be outstanding after any credit risk mitigation, if and when the counterparty defaults. EAD reflects drawn balances as well as allowance for undrawn amounts of commitments and contingent exposures.
F	
Funding risk	The risk that we cannot raise funding or can only do so at excessive cost.
G	
Guarantee	An undertaking by a party to pay a creditor should a debtor fail to do so.
H	
Haircut	A discount applied when determining the amount at which an asset can be realised. The discount takes into account the method of realisation, including the extent to which an active market for the asset exists. With respect to credit risk mitigation, a downward adjustment to collateral value to reflect any currency or maturity mismatches between the credit risk mitigant and the underlying exposure to which it is being applied. Also a valuation adjustment to reflect any fall in value between the date the collateral was called and the date of liquidation or enforcement.
High-quality liquid assets ('HQLA')	Total high-quality liquid assets" ('HQLA') is defined as the sum of liquid assets with the features as specified by the BoT as follows: I. Characteristics of liquid assets II. Guidelines on the calculation of liquid assets III. Operational requirements IV. Diversification of liquid assets The total HQLA is the value of total HQLA after the application of both haircuts and any applicable caps as specified by the BoT.

Term	Definition
I	
Internal Capital Adequacy Assessment Process ('ICAAP')	The Bank's own assessment of the levels of capital that it needs to hold through an examination of its risk profile from regulatory and economic capital viewpoints.
Internal liquidity adequacy assessment process ('ILAAP')	The Bank's own assessment to identify, measure, manage and monitor liquidity and funding risks across an appropriate set of time horizons and stress scenarios.
Internal Liquidity Metric ('ILM')	The Bank's own metric to assess the entity's ability to meet daily cash flow requirements over a 90-day liquidity stress and recovery capacity assuming a 90-day recovery period following the initial stress.
Internal Model Method ('IMM')	One of three approaches defined in the Basel framework to determine exposure values for counterparty credit risk.
Internal ratings-based ('IRB')	A method of calculating credit risk capital requirements using internal, rather than supervisory, estimates of risk parameters.
L	
Liquidity coverage ratio ('LCR')	The ratio of the stock of high quality liquid assets to expected net cash outflows over the following 30 days. High quality liquid assets should be unencumbered, liquid in markets during a time of stress and, ideally, be central bank eligible.
Liquidity risk	The risk that we do not have sufficient financial resources to meet our obligations as they fall due. This risk arises from mismatches in the timing of cash flows.
Loss given default ('LGD')	The estimated ratio (percentage) of the loss on an exposure to the amount outstanding at default (EAD) upon default of a counterparty.
M	
Market risk	The risk that movements in market risk factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices will reduce income or portfolio values.
N	
Net interest income	The amount of interest received or receivable on assets net of interest paid or payable on liabilities.
Net stable funding ratio ('NSFR')	The ratio of available stable funding to required stable funding over a one-year time horizon, assuming a stressed scenario. Available stable funding would include items such as equity capital, preferred stock with a maturity of over one year and liabilities with an assessed maturity of over one year.
Non-financial risk	The risk of loss resulting from people, inadequate or failed internal processes, data or systems or external events.
O	
Over-the-counter ('OTC')	A bilateral transaction (e.g. derivatives) that is not exchange traded and that is valued using valuation models.

Term	Definition
P	
Percentage of Liquidity Coverage Ratio (%LCR)	LCR is the ratio of total HQLA to total net cash outflows within the 30-day time horizon.
Probability of default ('PD')	The probability that an obligor will default within one year.
R	
Regulatory capital	The capital that the Bank holds, determined in accordance with rules established by the BoT.
Repo/reverse repo (or sale and repurchase agreement)	A short-term funding agreement that allows a borrower to create a collateralised loan by selling a financial asset to a lender. As part of the agreement, the borrower commits to repurchase the security at a date in the future repaying the proceeds of the loan. For the party on the other end of the transaction (buying the security and agreeing to sell in the future), it is a reverse repurchase agreement or a reverse repo.
Risk appetite	The level and types of risk a firm is willing to assume within its risk capacity to achieve its strategic objectives and business plan.
Risk-weighted assets ('RWA's)	Calculated by assigning a degree of risk expressed as a percentage (risk weight) to an exposure value.
S	
Securitisation	A transaction or scheme whereby the credit risk associated with an exposure, or pool of exposures, is tranched, and where payments to investors in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures. A traditional securitisation involves the transfer of the exposures being securitised to a SPE that issues securities. In a synthetic securitisation, the tranching is achieved by the use of credit derivatives and the exposures are not removed from the balance sheet of the originator.
Special Purpose Entity ('SPE')	A corporation, trust or other non-bank entity established for a narrowly defined purpose, including for carrying on securitisation activities. The structure of the SPE and its activities are intended to isolate its obligations from those of the originator and the holders of the beneficial interests in the securitisation.
Stage 1	Financial assets where 12-month ECL are recognised.
Stage 2	Financial assets which are considered to have experienced a significant increase in credit risk resulting in the recognition of lifetime ECL.
Stage 3	Financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit impaired.
Standardised approach ('SA')	In relation to credit risk, a method for calculating credit risk capital requirements using ratings agencies and supervisory risk weights. In relation to operational risk, a method of calculating the operational capital requirement by the application of a supervisory defined percentage charge to the gross income of eight specified business lines.

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>T</td><td></td></tr>
<tr><td>Total net cash outflows within the 30-day time horizon</td><td>The term “total net cash outflows within the 30-day time horizon” is defined as the sum of all types of expected cash outflows within the 30-day time horizon multiplied by respective run-off rates minus the sum of all types of expected cash inflows within the 30-day time horizon multiplied by respective inflow rates, but no more than 75% of total expected cash outflows as specified by the BoT.

<table><tr><td>Total net cash outflows within the 30-day time horizon under liquidity stress scenarios</td><td>= Total expected cash outflows within the 30-day time horizon under liquidity stress scenarios</td><td>- Total expected cash inflows within the 30-day time horizon under liquidity stress scenarios</td></tr></table></td></tr>
<tr><td>Treasury risk</td><td>The risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural and transactional foreign exchange exposures and changes in market.</td></tr>
<tr><td>V</td><td></td></tr>
<tr><td>Value at risk (‘VaR’)</td><td>A measure of the loss that could occur on risk positions as a result of adverse movements in market risk factors (e.g. rates, prices, volatilities) over a specified time horizon and to a given level of confidence.</td></tr>
</table>