



OCBC Bank (Malaysia) Berhad
(Incorporated in Malaysia)

Basel II Pillar 3 Market Disclosures 31 December 2021

The disclosure in this section refers to OCBC Bank (M) Berhad Group position. OCBC Bank (M) Berhad Group consists of OCBC Bank (Malaysia) Berhad and OCBC Al-Amin Bank Berhad which are members of the Overseas-Chinese Banking Corporation Group in Singapore.

BASEL II PILLAR 3 MARKET DISCLOSURES – 31 DECEMBER 2021

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OCBC Bank (Malaysia) Berhad
(Incorporated in Malaysia)

ATTESTATION BY CHIEF EXECUTIVE OFFICER PURSUANT TO RISK WEIGHTED CAPITAL ADEQUACY FRAMEWORK (BASEL II) – DISCLOSURE REQUIREMENTS (PILLAR 3)

The risk disclosures set out in the Risk Management Chapter and Basel II Pillar 3 Market Disclosure are generally in conformance with the Bank Negara Malaysia Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Banks (CAFIB-Basel II) – Disclosure Requirements (Pillar 3) for the Group as at 31 December 2021.

DATO' ONG ENG BIN
CHIEF EXECUTIVE OFFICER

Kuala Lumpur

Risk Management

OCBC (M) Group (hereinafter referred to as the Group) consists of OCBC Bank (Malaysia) Berhad (OCBC Bank) and OCBC Al-Amin Bank Berhad (OCBC Al-Amin) which are members of the Oversea-Chinese Banking Corporation Group (OCBC Group) in Singapore.

RISK MANAGEMENT IN OCBC (M) GROUP

At OCBC (M) Group, our corporate values and risk principles are firmly embedded in the way we manage risk.

Our risk management framework comprises strong governance, sound policies and methodologies, and skilled professionals, supported by fit for purpose technology, infrastructure and data. It is underpinned by a corporate culture that emphasizes accountability, ownership and high ethical standards. We aim to take risks that are consistent with our corporate strategy and risk appetite, well understood and can be holistically analysed and monitored, and appropriately priced to provide us with an adequate return.

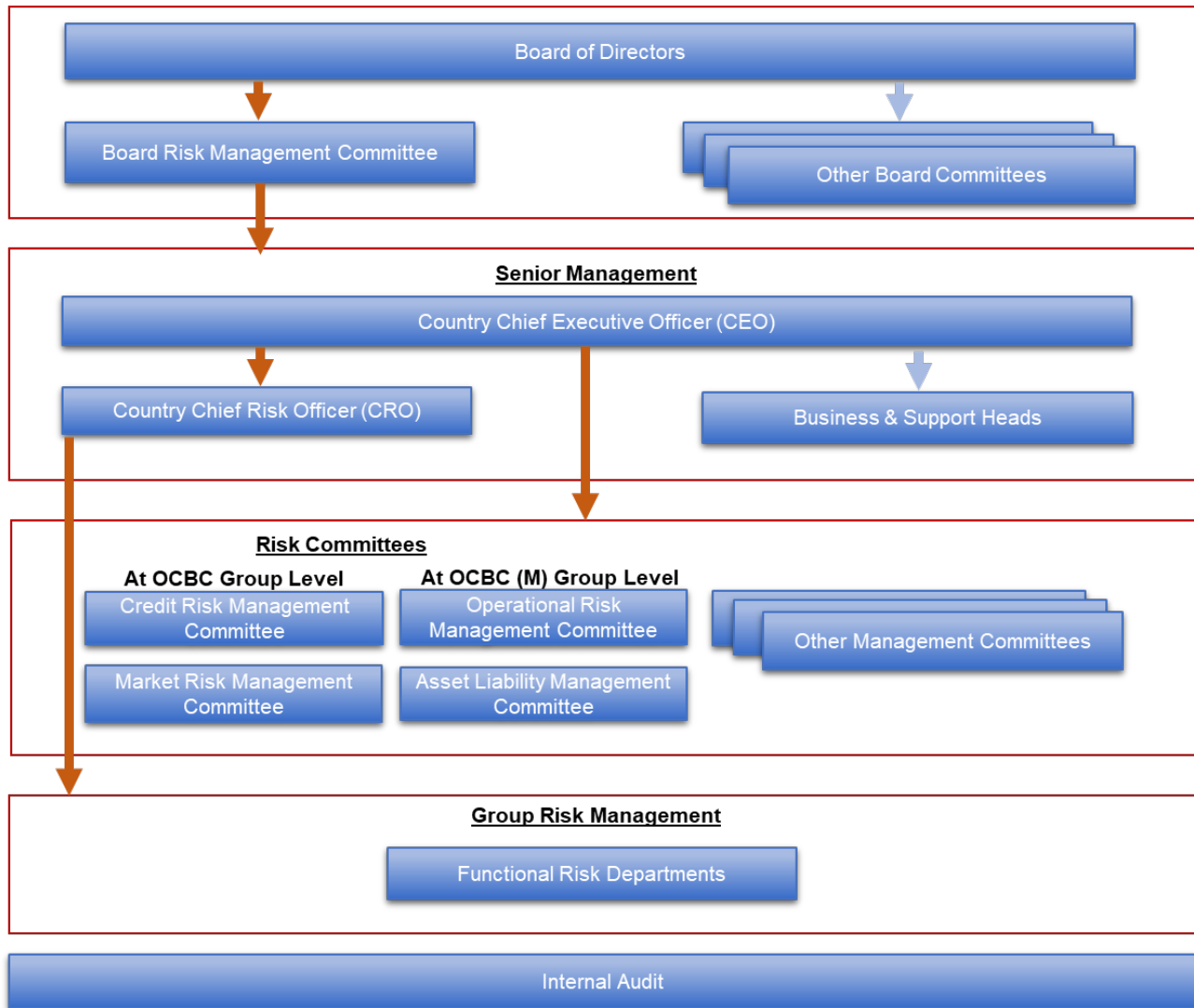
While the categorisation of risks can be complex because of inter-relationships, we generally categorise the risks we take into the following principal risk types:

Principal Risks	Definition
Credit Risk	Credit risk is the risk of losing principal and/or income arising from the failure of an obligor or counterparty to meet its financial or contractual obligations or an adverse change in the credit profile of the obligor or counterparty.
Market Risk	Market risk is the risk of losing income and/or market value due to fluctuations in factors such as interest rates, foreign exchange rates, credit spreads, equity and commodity prices or changes in volatility or correlations between such factors.
Liquidity Risk	Liquidity risk is the risk arising from the inability to meet financial and cash outflow obligations as they fall due without incurring unacceptable costs or losses from funding capital and asset liquidation.
Interest Rate Risk in the Banking Book	Interest Rate Risk in the Banking Book is the risk to income and/or capital arising from exposure to adverse changes in the interest rate environment.
Operational Risk	Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems and management or from external events. This is a broad risk category that encompasses pandemic risk, compliance risk, reputational risk, fiduciary risk, physical and people security risk, business continuity risk, third-party risk, fraud risk, legal and regulatory risk, anti-money laundering/countering the financing of terrorism and sanctions risk, technology and information risk, as well as cyber risk.

Please refer to the respective sections for details of our risk management approach for each of the principal risk types.

We adopt a disciplined risk management approach to identify, assess, measure, control, monitor and report our risk positions at granular and aggregate levels. We regularly assess the potential shifts in risk drivers and potential impact on the Group's business to formulate appropriate risk mitigation actions where necessary. There are multiple risk drivers that arise from developments in the economic, business and physical environment, geopolitical shifts, regulatory and social changes, pandemic risk, cyber threats, data loss, fraud and human error. These drivers impinge on one or more of the risk types mentioned above with consequential impact to earnings and asset quality as well as to reputation, customer franchise, and ability to do business.

RISK GOVERNANCE AND ORGANISATION



The chart above illustrates the risk governance and oversight structure in the Group. The Board of Directors (Board) has ultimate responsibility for the effective management of risk. It establishes the corporate strategy and approves the risk appetite within which senior management should execute the strategy.

The Risk Management Committee (RMC) is the designated board committee overseeing risk management matters. It ensures that the Group’s overall risk management philosophy are aligned with the corporate strategy and within the approved risk appetite. It also ensures that the necessary overall risk management organisation is in place and effective. To build the resilience of our lending portfolio against Environmental, Social and Governance (ESG) risks and support our commitment to sustainability, RMC oversees the integration of responsible financing practices into our risk management processes and the adequate channelling of capital – through green and transition finance – to support decarbonisation of the economy.

Based on the approved risk appetite, RMC approves various quantitative guidance and qualitative expectations for cascading to major business units and risk functions to guide risk-taking. Risk drivers, risk profiles across major lines of business and risk types, as the risk management framework and major risk policies as well as compliance matters are regularly reviewed by senior management, risk committees, Country Chief Executive Officer (Country CEO) and RMC. These matters are reviewed and discussed in greater detail at the dedicated risk committees for major risk types.

Group Risk Management (GRM) has the day-to-day functional responsibility for providing independent risk control and managing credit, market, liquidity and operational risks. It provides regular risk reports and updates on development in material risk drivers, potential vulnerabilities and the recommended mitigating actions to the senior management, risk committees, RMC and the Board. Risk management staff work closely with the business and other support units to ensure that risks are well understood and managed.

GRM also oversees the New Product Approval Process (NPAP) to ensure that all inherent risks associated with new products and services are comprehensively identified, managed and mitigated. Compliance with regulatory requirements and adequacy of resources to support the new products and services are also addressed through the NPAP.

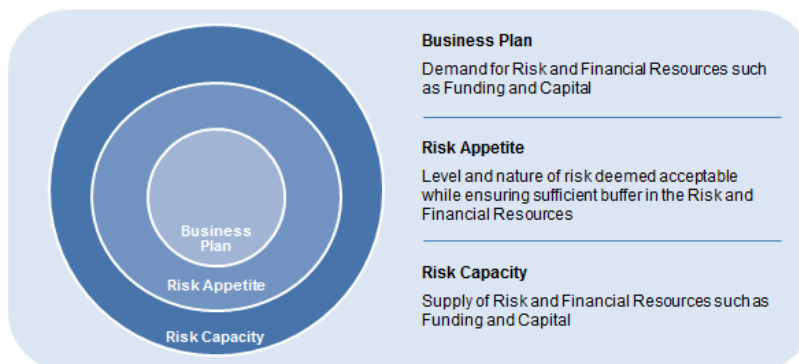
Three Lines of Defence

All employees are responsible for identifying and managing risk – an accountability that is embedded in our corporate culture and robust internal control environment. This is operationalised through a three-line defence structure with clear delineation of the roles, responsibilities and accountability for risk ownership.

Three Lines of Defence		
First Line	Second Line	Third Line
Day-to-day Risk Management	Risk and Control Oversight	Independent Assurance
<p>Business and Support Units own and manage risks arising from their business activities on a day-to-day basis. They carry out business activities which are consistent with Group’s strategy and risk appetite. They operate within the approved boundaries of our policies and limits and ensure compliance with applicable laws and regulations.</p>	<p>The Risk and Control Function independently and objectively assesses risk-taking activities of the first line of defence. It establishes relevant risk management frameworks, policies, processes and systems. It also provides independent identification, assessment, monitoring and reporting of the Group’s risk profiles, portfolio concentrations and material risk issues.</p>	<p>Internal Audit independently assures the Country CEO, Audit Committee and the Board on the adequacy and effectiveness of our risk management and internal control systems. It also evaluates the overall risk awareness and control consciousness of the management in discharging its supervisory and oversight responsibilities.</p>

RISK APPETITE

Our objective is to manage risks prudently and sustainably for the long term viability of the Group while balancing the needs of all stakeholders. In this regard, the Board has established the Group’s risk appetite, which defines the level and nature of risks that we are willing to take in the conduct of our business on behalf of our shareholders while maintaining our commitments to customers, debt holders, employees, regulators, and other stakeholders. Business plans are designed having due regard to the risk appetite which in turn is a function of our capacity to absorb risks taking into account capital, funding, and other resources.



Our risk appetite takes into account forward-looking operating environment and potential downside risks. Business plans are guided by our risk appetite through policies, limits and processes to ensure that we operate within our available risk capacity.

Senior business and risk managers participate in regular forums to review the macroeconomic and financial development and discuss the operating environment, event risks and potential “dark clouds” that may have a significant impact on our earnings or solvency. These are quantified via stress tests as well as segment-specific and ad hoc event-specific portfolio reviews to assess the potential impact of alternative scenarios on the Group’s earnings and capital, and the vulnerabilities of material portfolios.

An Internal Capital Adequacy Assessment Process (ICAAP) incorporating the results of stress tests covering various risk types is conducted annually. The objective is to evaluate if our multi-year business plans allow us to maintain sound capital levels under both forward-looking operating environment and severe stress scenarios. Appropriate risk-mitigating actions are taken to manage downside risks.

CREDIT RISK MANAGEMENT

Credit risk arises from our lending activities to retail, corporate and institutional customers. It also includes counterparty and issuer credit risks arising from our underwriting, trading and investment banking activities.

Credit Risk Management Approach

Our credit risk management framework captures the complete credit risk management cycle. It is operationalized through policies and procedures covering the identification, assessment, measurement and monitoring, as well as control and mitigation of credit risk at the enterprise level.

Our credit risk management approach varies according to the characteristics and nature of the portfolios or customer segments. Specific policies and procedures are established for major customer segments. Please refer to Table 1 for more information.

Table 1: Credit Risk Management Approach for Major Customer Segments	
Consumers and Small Businesses	Corporate and Institutional Customers
<ul style="list-style-type: none"> • Credit risks are managed on portfolio basis. • Bankruptcy, credit bureau checks, along with systems and processes such as source identification of credit origination and independent verification of documentation are used to detect fraud. • Comprehensive risk management information systems (MIS) are used to track and monitor the performance of the portfolios. 	<ul style="list-style-type: none"> • Credits extended are individually assessed and risk rated. • The extensions are guided by predefined target market and risk acceptance criteria. • Credit decisions are made after comprehensive qualitative and quantitative risk assessment, with understanding of the customer and customer group’s interdependencies. • Credits are jointly approved by business and credit risk units to ensure objectivity and shared risk ownership.

Counterparty Credit Risk Management

Counterparty Credit Risk (CCR) typically arises from our trading and/or banking activities in derivatives and debt securities. CCR is the risk that the counterparty may default on its obligations during the term of the financial contract. The credit exposure to a counterparty is measured as the sum of current mark-to-market value of the transaction plus an appropriate add-on for potential future exposures in response to market prices changes. CCR also covers settlement risk which is the risk of loss during the settlement process due to a counterparty’s failure to fulfil its obligation after the Bank has performed its obligation under a contract or agreement at the settlement date.

Credit limits are established for each counterparty based on our assessment of the counterparty's creditworthiness. We also assess the suitability and appropriateness of the product offered and ensure alignment with approved trading mandates and investment strategies. Credit risk mitigation tools are also used to manage CCR where appropriate. Please refer to the Credit Risk Mitigation Section for details.

Credit exposures are independently managed through daily limit monitoring, excess escalation and approval and pre-deal excess approval, and timely risk reporting.

ESG Risk Management

Managing ESG risks is an integral part of our credit risk management. We have a dedicated responsible financing framework that defines our approach and commitment in managing ESG risks. This framework is operationalised through supporting policies and procedures (including the requirements of the Equator Principles) to integrate ESG considerations into our credit risk evaluation and approval process for corporate lending, debt issuance and underwriting activities. Transactions with high ESG risks are subject to enhanced evaluation and approval requirements, including escalation of transactions with significant reputational risks to the Reputational Risk Review Group.

Credit Portfolio Management

Credit portfolio management focuses on managing the 'collective or aggregate risk' of our credit portfolio, rather than the credit risk of individual borrowers. We have developed and implemented a range of capabilities to better understand, measure and monitor credit risk at a portfolio level. These capabilities include:

- **Portfolio Segmentation:** This is the process of grouping credit exposures that are similar in nature. It involves the use of attributes that represent common business drivers such as location, industry and product type, as well as common risk drivers such as exposure to material downside risks like a property bubble.
- **Portfolio Modelling:** This includes the use of internal rating models to quantify the exposure risk, default risk and potential losses of our borrowers. Please refer to Table 2 for information on our internal rating models. We also use stress testing models to simulate the potential increase in our credit losses and credit risk-weighted assets under stressed scenarios.

Table 2: Internal Rating Models

Internal credit rating models and their parameters – probability of default (PD), loss given default (LGD) and exposure at default (EAD) – are used in limit setting, credit approval, portfolio monitoring and reporting, remedial management, stress testing, internal assessment of the capital adequacy and impairment allowances.

Our Model Risk Management Framework governs the development, validation, application and maintenance of rating models. All rating models are assessed against internal and regulatory requirements and approved by regulators for use in capital assessment. Approval for the adoption and continued use of material models rests with the RMC.

While our internal risk grades are not explicitly mapped to external credit ratings, they may correlate with external credit ratings in terms of the PD ranges as factors used to rate obligors would be similar. Hence, an obligor rated poorly by an external credit rating agency is likely to have a weak internal risk rating.

The table below describes the approach used to estimate the key parameters for Advanced Internal Ratings Based (A-IRB) and Foundation Internal Ratings Based (F-IRB) credit risk models used to calculate Credit Risk Weighted Assets (CRWA).

Key Components of Internal Ratings Based (IRB) Models		
IRB Models and Portfolios	PD	LGD and EAD
A-IRB approach includes major retail portfolios such as residential mortgages, credit cards and small businesses lending	<ul style="list-style-type: none"> Estimated based on the application and behaviour scores of obligors. PD models are calibrated to the expected long-term average one-year default rate over an economic cycle. 	<ul style="list-style-type: none"> Product and collateral characteristics are major factors. LGD models are calibrated to reflect the economic loss under downturn conditions. EAD models are calibrated to reflect the default-weighted average and economic downturn conditions.
F-IRB (Non-Supervisory Slotting) approach includes major wholesale portfolios such as bank, non-bank financial institutions, corporate real estate (including income producing real estate) and general corporate	<ul style="list-style-type: none"> PD models are statistical based or expert judgement models that use both quantitative and qualitative factors to assess an obligor's repayment capacity. The models are calibrated to the expected long-run average one-year default rate over an economic cycle. Expert judgement models based on inputs from internal credit experts are typically used for portfolios with low default rates. 	<ul style="list-style-type: none"> Estimated based on rules prescribed in Bank Negara Malaysia (BNM) Risk-Weighted Capital Adequacy Framework (RWCAF).
F-IRB (Supervisory Slotting) approach includes other specialised lending portfolios such as project finance, object finance and commodities finance	<ul style="list-style-type: none"> Risk grades derived from internal models are mapped to the five supervisory slotting categories prescribed in BNM RWCAF. 	<ul style="list-style-type: none"> Estimated based on rules prescribed in BNM RWCAF.

- Portfolio Reporting:** This includes internal and external reporting of portfolio risk information to respective stakeholders. These reports provide a better understanding of how the quality of our credit portfolio is evolving in response to the changing operating environment and downside risks. Regular risk reports covering detailed credit exposures, credit migration, expected losses and risk concentrations by business segment are provided to the CRMC, CEO, RMC and the Board for review and make timely, better-informed decisions.

With the insights provided by portfolio modelling and reporting, we allocate appropriate risk and financial resources (such as funding and capital) to support growth opportunities. We also use these insights to set credit concentration limits to manage the potential downside risks from adverse changes in the operating environment. The design of such credit concentration limits takes into consideration direct risk drivers (such as economic sector, industry, geographic location) and indirect risk drivers (such as collateral type or credit protection by a single counterparty) arising from credit risk mitigation.

Credit Risk Mitigation

Credit risk mitigation techniques are used to reduce credit risk exposures. Where possible, we take collateral from the borrower to mitigate credit risk. However, risk mitigation is not a substitute to the proper assessment of the obligor's ability to repay which remains the primary repayment source.

The key considerations for eligible credit risk mitigants are set out in our credit policies. These criteria include legal certainty and enforceability, correlation, liquidity, marketability, counterparty risk of the protection provider and collateral-specific minimum operational requirements. Eligible physical and financial collateral types include cash, real estate, marketable securities, standby letters of credit and credit insurances.

Appropriate haircuts are applied to the market value of the collateral to reflect its underlying nature, quality, liquidity and volatility. Collateral is independently valued on regular basis while collateral holdings are regularly monitored and concentration avoided via diversification across asset classes and markets. Guarantees from individuals, corporates, and institutions are accepted as a form of support. Where guarantees are recognised as credit risk mitigants via the PD substitution approach, eligibility criteria and guidelines are in place.

Netting, collateral arrangements, early termination options and central clearing mechanisms are common risk mitigation tools for managing counterparty credit risk. Netting agreements in netting jurisdictions reduces the credit risk exposure where all amounts with the counterparty are settled on a net basis if a default occurs. Collateral arrangements are typically covered under market standard documentation such as International Swaps and Derivatives Association (ISDA) and Credit Support Annexes (CSA) or Global Master Repurchase Agreements (GMRA). Such arrangements will require additional collateral to be posted if the mark-to-market exposures exceed an agreed threshold. A haircut is applied to the value of the eligible collateral to cover potential adverse market volatility and the agreed threshold amount may be subject to regulatory margin requirements. ISDA agreements with rating triggers allow termination of the transactions or require posting of additional collateral in event of a rating downgrade.

Remedial Management

The Group safeguards our asset quality through proactive and regular monitoring of our credit portfolios. A robust process is in place to detect vulnerable borrowers with signs of potential credit deterioration at an early stage. These borrowers are reviewed regularly via various internal credit forums or committees.

Credit exposures are categorised into “Pass”, “Special Mention” or “Impaired Loans” (ILs). ILs are further categorised into “Substandard”, “Doubtful” or “Loss”. The categorisation of credit exposures is based on our assessment of the borrowers’ ability to repay their financial obligations. ILs may be upgraded to non-impaired status when there is an established trend of credit improvement, supported by an assessment of the borrower’s repayment capability, cash flows and financial position.

Credit exposures are classified as restructured assets when the Group grants non-commercial concessions to borrowers which will result in substantial diminished financial obligation. A restructured credit exposure is classified into the appropriate impaired loans grades based on the assessment of the borrower’s financial condition and ability to repay under the restructured terms. Such credit exposure must comply fully with the restructured terms before it can be restored to non-impaired status.

Dedicated remedial management units manage the restructuring and recovery of ILs for wholesale portfolios. The objective is to rehabilitate ILs where possible or maximise recoveries for ILs that are on exit strategy. For the retail portfolios, we develop appropriate risk-based and time-based collection strategies to maximise recoveries. We use data such as delinquency buckets and adverse status tags for delinquent retail loans to constantly analyse, fine-tune and prioritise our collection efforts.

Impairment Allowances for Loans

Sufficient impairment allowances are maintained to absorb credit losses inherent in our credit portfolio. Allowance for Expected Credit Losses (ECL) is recognised for credit impaired and non-credit impaired exposures in accordance with Malaysian Financial Reporting Standard (MFRS) 9 - Financial Instruments through a forward looking ECL model. ECL allowances are assessed on a forward-looking basis and based on the three stages of credit risk under this framework.

Stages of Credit Risk and Expected Credit Losses



MARKET RISK MANAGEMENT

Market risk arises mainly from our trading, client servicing and balance sheet management activities.

Market Risk Management Approach

The Group's market risk management framework covers the identification, assessment, measurement, monitoring, and control of risks. Market risk policies and procedures are established to provide common guidelines and standards for managing market risk. Our market risk management strategy and limits – established within our risk appetite and in line with our business strategies – are regularly reviewed, taking into account prevailing macroeconomic and market conditions.

Market Risk Identification

The Group's internal NPAP ensures that market risk is properly identified and quantified, and that we are able to manage and mitigate such risks.

Market Risk Measurements

Value-At-Risk

Value-at-risk (VaR) is a key metric used to quantify market risk exposures arising from our trading activities. VaR is measured and monitored by its individual market risk components, namely interest rate risk, foreign exchange risk, equity risk and credit spread risk, as well as at the consolidated level. Our VaR model is based on the historical simulation approach, calibrated at the 99% confidence level and the one-day holding period. The defined confidence threshold of 99% means that, statistically, losses on a single trading day may exceed VaR, on average, once every 100 days.

Other Risk Measures

Apart from VaR, there are numerous other market risk measures used in monitoring the market risk of the Treasury positions. Present Value of a Basis Point (PV01) - which measures the change in value of interest rate sensitive exposures resulting from one basis point increase across the entire yield curve - is an important interest rate risk measure monitored on a daily basis. FX Net Open Position (NOP) measures the exposure to each currency while present value of a basis point increase in Credit Spreads (CS01) measures the change in value of credit sensitive exposures resulting from one basis point increase in the credit spread. Risk measures used also include FX basis limits, notional limits and derivative greeks for specific exposure types.

Stress Testing and Scenario Analysis

We perform stress testing and scenario analysis to further assess the potential losses arising from low probability but plausible extreme market conditions. The stress scenarios are regularly reviewed and fine-tuned to ensure that they remain relevant to our trading activities and risk profile as well as prevailing and forecasted economic conditions. This analysis determines if the potential losses from such extreme market conditions are within our risk tolerance. Besides the regular stress scenarios, ad-hoc stress scenarios are also performed for specific market conditions to assess the potential impact.

Risk Monitoring and Control

Limits

Only authorised trading activities for approved products may be undertaken by the various trading units. All trading risk positions are monitored by independent support units on a daily basis against approved and allocated market risk limits. Trading activities are conducted within approved mandates and dynamically hedged to remain within market risk limits. High utilisations alert are sent to traders and head of desk when utilisations exceeds 70%. Limit excesses and triggers are promptly reported and escalated to senior management and committees as per the Market Risk Limit Control Policy.

Model Validation

Model validation is also an integral part of our risk control process. Financial models are used to value and measure the risk of the financial instruments. These models are governed by the Model Risk Management Framework which ensures that the models used are fit for their intended purpose through independent verification and periodic review. We source market rates independently for risk measurements and valuations to enhance the integrity of the trading P&L and risk measures generated by these models.

Back-Testing

To ensure the continued integrity of our VaR model, we regularly back-test the VaR estimates against actual daily trading P&Ls and theoretical P&Ls. Back-test exceptions are promptly investigated and results are escalated to senior management.

ASSET LIABILITY MANAGEMENT

Asset liability management refers to the strategic management of the Group's balance sheet structure and liquidity requirements. It covers liquidity sourcing and diversification as well as interest rate risk management.

Asset Liability Management Approach

Our asset liability management framework focuses on managing the exposures arising from the Group's balance sheet. We monitor our liquidity risk and interest rate risk in the banking book (IRRBB) profiles against approved risk limits under both business-as-usual and stressed scenarios. These are based on the standards established in the framework, policies and procedures which are subject to regular reviews to ensure that they remain relevant in the context of prevailing market practices and regulatory guidelines.

We have robust internal control processes and automated systems to support our asset liability management approach. We are also embarking on system upgrades to improve risk reporting and roll out new functionalities to support the changing regulatory landscape.

Liquidity Risk

The objective of liquidity risk management is to ensure that we have sufficient funds to meet contractual and regulatory financial obligations and to undertake new transactions.

Liquidity monitoring is performed daily within a framework for projecting cash flows on a contractual and behavioural basis. Indicators such as liquidity and deposit concentration ratios are used to establish the level of optimal funding mix and asset composition. Funding strategies are established to provide effective diversification and stability in funding sources across tenors and products. Simulations of liquidity exposures under stressed market scenarios are performed and the results are used to adjust liquidity risk management strategies, policies and positions, as well as develop contingency funding plans. We maintain liquid assets in excess of regulatory requirements to strengthen our ability to meet liquidity needs during a crisis. These liquid assets comprise central bank reserves and marketable securities.

Interest Rate Risk in the Banking Book

The primary goal of the management of IRRBB is to ensure that interest rate risk exposures are maintained within defined risk tolerances and are consistent with our risk appetite. The material sources of IRRBB are repricing risk, basis risk and optionality risk.

We use a range of calculation methodology to measure IRRBB from both the earnings and economic value perspective on a monthly basis. One method involves the assessment of the impact of various interest rate scenarios on the Group's net interest income and the economic value of equity (EVE) of the banking book. Other measures include interest rate sensitivity measures such as PV01 and repricing gap profile analysis. Behavioural models are used to assess interest rate risks in relation to loan prepayment, time deposit early redemption and the profile of non-maturity deposits. These measurements are used to adjust IRRBB management and hedging strategies, policies and positions.

OPERATIONAL RISK MANAGEMENT

Operational risk is inherent in all banking products, activities, processes and systems. The effective management of operational risk is a fundamental element of our risk management programme.

Operational Risk Management Approach

Our operational risk management framework ensures operational risks are properly identified, managed, monitored, mitigated, and reported in a structured and consistent manner. It enables us to fulfil our fiduciary duties, comply with legal and regulatory requirements, mitigate other risk factors and manage any reputational risk impact. We aim to manage both expected and unexpected losses, including those caused by catastrophic events. These twin objectives act as parameters to manage our risk as we pursue new business opportunities.

Each business unit undertakes self-assessments on a regular basis by evaluating the robustness of its risk and control environment, including compliance with all legal and regulatory requirements. Key operational risk indicators are also used to detect early warning signals and to drive appropriate management actions before the risks result in material losses. Operational risk data is also analysed and reported regularly to senior management.

Senior management attests annually to the CEO and notifies RMC on the adequacy and effectiveness of the internal controls and risk management systems and highlights accompanying remedial plans to address any outstanding key control deficiencies.

We have an insurance strategy to reduce earnings volatility arising from unpredictable material adverse operational risk events by transferring the risk to insurers. Our insurance programmes protect us and our employees against adverse events relating to crime, cyber risks, professional indemnity, directors' and officers' liability, property damage and public liability.

In addition, the subject-specific key risks that we focus on include but are not limited to the following:

Key Risks	How is risk managed?
Cyber Risk	Through a bank-wide strategy and comprehensive defence-in-depth approach to prevent, detect and respond to the evolving cyber threat landscape. This approach comprises: <ul style="list-style-type: none">• Robust framework and policies;• Extensive cyber defence capabilities, cyber risk awareness and training programmes, social engineering testing campaigns, incident response, crisis management and business continuity, as well as insurance protection; and• Multi-layered controls and processes established using a "defence-in-depth" approach which includes a 24-hour Cybersecurity Operations Centre.

Fraud Risk	<p>Through fraud risk management and whistle-blowing programmes to prevent and detect fraud or misconduct. These programmes comprise:</p> <ul style="list-style-type: none"> • Via robust anti-fraud detection measures which include enhancing our transactional monitoring system with in-house Machine Learning algorithms, and strengthening financial malware detection capabilities to detect any compromised devices interacting with our online banking platforms.
Anti-Money Laundering (AML)/ Countering the Financing of Terrorism (CFT) and Sanctions Risk	<p>Through a robust group wide AML/CFT and sanctions framework and programme that are aligned with BNM, MAS and sanctions regulations, as well as with international organisations, such as the Financial Action Task Force (FATF), Basel Committee and Wolfsberg Group. The framework and programme comprise:</p> <ul style="list-style-type: none"> • AML/CFT & Sanctions policies, guidelines and procedures covering key pillars such as customer due diligence, transaction surveillance and escalation protocol; • Dedicated AML/CFT committee with members drawn from senior management to have oversight over AML/CFT and sanctions matters; and • Risk assessment methodologies leveraging on existing monitoring and screening platforms to assess customer, product and geographical risks. This includes the use of surveillance platform to monitor emerging financial crime trends and typologies.
Third-Party Risk	<p>Through a bank-wide third-party risk management programme to manage the risk arising from the use of outsourcing and third-party service providers in a comprehensive and consistent manner.</p>
Information and Technology Risk	<p>Through an extensive bank-wide approach towards governing and managing information and technology risk which comprises:</p> <ul style="list-style-type: none"> • A robust governance and oversight framework, supported by a comprehensive suite of policies, standards and risk mitigation initiatives that are integrated across the three lines of defence; • Mandatory risk awareness training programme, thematic reviews to uplift data protection posture; and • Guidelines to promote the safe adoption of emerging technologies.
Physical and People Security Risk	<p>Through a programme to address the physical and security risks to people and assets. This programme comprises:</p> <ul style="list-style-type: none"> • Active monitoring of external events that may pose a threat to OCBC locations, people and assets. • Provision of advisories and response procedures to better prepare the Bank and our employees to handle risk events, including risks posed to staff on business travel.
Conduct Risk	<p>Through a groupwide culture and conduct framework to encourage right employee behaviours. This framework comprises:</p> <ul style="list-style-type: none"> • A robust corporate governance structure with dedicated Board and senior management committees to manage and oversee culture and conduct matters. • Various policies, programmes and initiatives that promote good culture and conduct, effective risk governance and employee accountability. These include a dashboard for the monitoring and reporting of culture and conduct-related matters such as customer complaint trends, staff attrition rates, regulatory breaches, and

	<p>whistleblowing investigations to management.</p> <ul style="list-style-type: none"> • An Employee Conduct Triggers (ECT) Programme covering all our staff that provides clear and measurable conduct indicators. Violation of these indicators will incur ECT points; the accumulation of such points is subject to management review and could lead to disciplinary action.
Business Continuity Risk	<p>Through a programme to minimise the disruption to essential business activities and services during a crisis. The programme comprises:</p> <ul style="list-style-type: none"> • Robust recovery strategies and business recovery plans which are reviewed and tested annually. • Annual attestation by senior management to the RMC on the business continuity readiness, extent of alignment with regulator's guidelines and declaration of acceptable residual risk.
Unauthorised Trading Risk	<p>Through a treasury trade surveillance programme to detect and deter rogue trading activities, which comprises:</p> <ul style="list-style-type: none"> • Robust governance and clearly-defined roles and responsibilities across the three lines of defence. • Continuous monitoring and verification of key controls and key risk indicators. These can provide early warning of potential control issues that might create opportunities for unauthorised trading activities and drive risk management actions to rectify any control gaps. • Independent surveillance and investigation by an independent Control Assurance Function within GRM and strong oversight by various risk committees.
Legal and Regulatory Risk	<p>Through a legal and compliance risk management framework which defines the required environment and organisational components to ensure compliance with relevant laws, regulations, rules and standards. The framework is complemented by stringent and robust compliance policies, procedures and guidelines based on international best practices which are adapted to our requirements, and regular staff training.</p>
Fiduciary Risk	<p>Through a fiduciary risk management programme to manage risks associated with fiduciary relationships which arise where two parties (i.e. the fiduciary and the principal) agree that the fiduciary will act on behalf of or for the benefit of the principal, in circumstances which would give rise to a relationship of trust and confidence. The programme provides guidelines on identification, assessment, monitoring of and response to fiduciary risk exposures to ensure compliance with applicable fiduciary standards.</p>
Reputational Risk	<p>Through a reputational risk management policy which focuses on understanding and managing our responsibilities towards our stakeholders and protecting our reputation. This programme comprises:</p> <ul style="list-style-type: none"> • Identification, assessment, monitoring and mitigation of reputational risk exposures, as well as effective information sharing and engagement with our stakeholders.

SHARIAH GOVERNANCE

Overview

OCBC Al-Amin Bank Berhad (OABB) is governed under Islamic Financial Services Act 2013 (IFSA) which requires Islamic Financial Institutions (IFI) to ensure that its aims and operations, business, affairs and activities are Shariah compliant and in accordance with the advice or ruling issued by the Shariah Advisory Council (SAC). BNM has issued the Shariah Governance Framework (SGF) that sets out the expectations on an IFI's Shariah governance structures, processes and arrangements to ensure that all its operations and business activities are in accordance with Shariah. SGF also provides a comprehensive guidance to the board, Shariah Committee and management of the IFI in discharging its duties in matters relating to Shariah and outlines the functions relating to Shariah review, Shariah audit, Shariah risk management and Shariah research. In 2019, BNM issued the revised policy document on Shariah Governance that outlines strengthened regulatory expectations for effective Shariah governance arrangements that are well-integrated with business and risk strategies of the IFI. In this respect, OABB operationalizes the SGF requirements in its internal Shariah Governance Framework.

Shariah Risk Management

Shariah risk management is a function that systematically identifies, measures, monitors and reports Shariah non-compliance risks in the operations, business, affairs and activities of OABB. Shariah non-compliance risk refer to the risk of legal or regulatory sanctions, financial loss or non-financial implications including reputational damage, which OABB may suffer arising from failure to comply with the rulings of the Shariah Advisory Council of Bank Negara Malaysia (SAC), standards on Shariah matters issued by BNM pursuant to section 29(1) of the IFSA, or decisions or advice of the OABB's Shariah Committee. The Shariah risk management function involves:

- (i) integrate Shariah non-compliance risk considerations with enterprise-wide risk management;
- (ii) identify Shariah non-compliance risk exposures in the business operations and activities of OABB;
- (iii) assess Shariah non-compliance risk and measure the potential impact of the risk exposures to OABB;
- (iv) establish appropriate risk mitigation measures;
- (v) monitor Shariah non-compliance risk exposures and effectiveness of the risk mitigation measures;
- (vi) report to the Board, Shariah Committee and senior management on the Shariah non-compliance risk exposures; and
- (vii) constructively challenge decisions that may give rise to Shariah non-compliance risks.

All potential Shariah Non-Compliance Events (SNCEs) are initially assessed by Shariah Review Department (SRD) as the control function that is responsible for the assessment and submitted to OABB's Shariah Committee for confirmation and decision in order to determine the status of the events and potential Shariah non-compliant income. All actual SNCEs upon confirmation by Shariah Committee are to be reported to BNM within the required timeframe set by BNM. In ensuring a robust oversight on Shariah non-compliance risk, periodic reporting on Shariah non-compliance risk is submitted to Risk Management Committee.

Note:

In this document, for whatever that is related to Islamic Banking, the following terms shall apply:

1. Risk Weighted Capital Adequacy Framework (RWCAF) also refers to Capital Adequacy Framework for Islamic Bank (CAFIB) (inclusive of Disclosure Requirements for Pillar 3 where applicable);
2. Loan also refers to Financing;
3. Borrower also refers to Customer;
4. Interest also refers to Profit;
5. Interest Rate also refers to Profit Rate;
6. Lending also refers to Financing.

Basel II Pillar 3 Market Disclosure

(OCBC Bank (M) Berhad Group – Position as at 31 December 2021)

The purpose of this disclosure is to provide the information in accordance with BNM Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Bank (CAFIB - Basel II) – Disclosure Requirements (Pillar 3) Guidelines. This supplements the disclosure in the Risk Management Chapter as well as related information in the Notes to the Financial Statements.

Exposures and Risk Weighted Assets (RWA) by Portfolio

	EAD ¹ RM million	RWA RM million
Credit Risk		
Standardised Approach		
Corporate	264	203
Sovereign & Central Bank	19,469	102
Public Sector Entities	1,049	644
Retail	148	138
Equity	116	116
Securitisation	-	-
Others	625	473
Total Standardised	21,671	1,676
Internal Ratings-Based (IRB) Approach		
Foundation IRB		
Corporate	40,994	35,305
Bank	3,535	469
Advanced IRB		
Residential Mortgage	25,519	3,513
Qualifying Revolving Retail	1,771	566
Other Retail - Small Business	8,978	3,414
Specialised Lending under Supervisory Slotting Criteria	230	281
Total IRB	81,027	43,548
Total Credit Risk	102,698	45,224
Market Risk		
Standardised Approach		1,361
Total Market Risk		1,361
Operational Risk		
Standardised Approach ²		5,204
Total Operational Risk		5,204
Total RWA		51,789

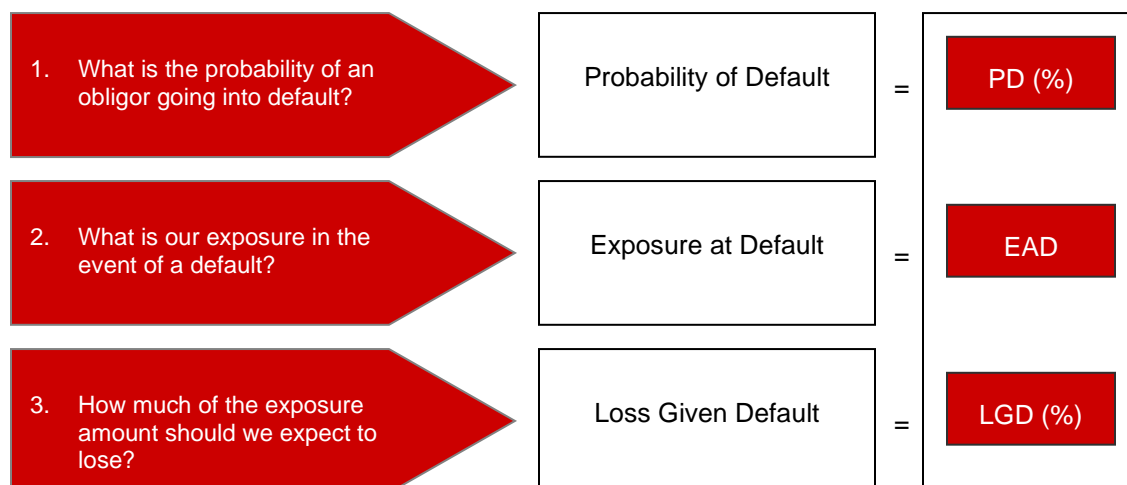
Note:

¹ EAD refers to exposure at default after credit risk mitigation

² OCBC Bank (M) Berhad Group and OCBC Bank (M) Berhad have adopted the Standardised Approach, while OCBC Al-Amin Bank Berhad is on the Basic Indicator Approach.

CREDIT RISK

With Basel II implementation, OCBC Bank (M) Berhad Group has adopted the Internal Ratings-Based (IRB) Approach for major credit portfolios, where 3 key parameters – Probability of Default (PD), Exposure at Default (EAD) and Loss Given Default (LGD) are used to quantify credit risk.



Credit Exposures under Standardised Approach

Credit exposures under standardised approach are mainly exposures to sovereign and central bank. Rated exposures relate mainly to sovereign and central bank while unrated exposures relate mainly to Islamic personal financing and other assets.

Risk Weight	EAD RM million
0%	19,732
20% - 35%	3
50% - 90%	543
100%	1,276
>100%	1
Total	21,555
Rated exposures	20,109
Unrated exposures	1,446

Note: Excludes Equity

Equity Exposures under Standardised Approach

Equity exposures for regulatory capital computation are risk weighted in accordance with BNM Risk-Weighted Capital Adequacy Framework (Basel II – Risk-Weighted Assets Computation) under the standardised approach.

Risk Weight	EAD RM million
100%	116
Total	116

Securitisation Exposures

There was no securitisation and re-securitisation exposure in the banking and trading books as at 31 December 2021.

Specialised Lending Exposures under Supervisory Slotting Criteria

Specialised lending exposures include project and object financing.

	EAD RM million	Average Risk Weight
Strong	-	0%
Good	-	0%
Satisfactory	230	122%
Weak	-	0%
Default	-	NA
Total	230	122%

Credit Exposures under Foundation Internal Ratings-Based Approach (F-IRBA)

Corporate exposures are mainly exposures to corporate and institutional customers, major non-bank financial institutions as well as financing of income-producing real estate. Bank exposures are mainly exposures to commercial banks.

Corporate Exposures

PD Range	EAD RM million	Average Risk Weight
up to 0.05%	552	20%
> 0.05 to 0.5%	13,363	48%
> 0.5 to 2.5%	17,216	97%
> 2.5 to 9%	6,702	132%
> 9%	1,545	207%
Default	1,616	NA
Total	40,994	86%

Bank Exposures

PD Range	EAD RM million	Average Risk Weight
up to 0.05%	2,061	10%
> 0.05 to 0.5%	1,445	16%
> 0.5 to 2.5%	29	97%
> 2.5 to 9%	-	0%
> 9%	#	227%
Default	-	NA
Total	3,535	13%

"#" represents amount less than RM0.5 million

Credit Exposures under Advanced Internal Ratings-Based Approach (A-IRBA)

Residential Mortgages are loans to individuals secured by residential properties. Qualifying Revolving Retail exposures are credit card facilities to individuals. Other Retail – Small Business exposures include lending to small businesses and commercial property loans to individuals.

Residential Mortgages

PD Range	EAD	Undrawn Commitment	EAD Weighted Average	
	RM million	RM million	LGD	Risk Weight
up to 0.5%	17,641	1,567	9%	5%
> 0.5 to 3%	4,421	264	11%	15%
> 3 to 10%	916	19	12%	47%
> 10%	1,602	16	13%	73%
100%	939	23	19%	32%
Total	25,519	1,889	10%	14%

Qualifying Revolving Retail Exposures

PD Range	EAD	Undrawn Commitment	EAD Weighted Average	
	RM million	RM million	LGD	Risk Weight
up to 0.5%	1,217	2,104	75%	11%
> 0.5 to 3%	352	360	67%	40%
> 3 to 10%	142	76	75%	127%
> 10%	56	29	75%	210%
100%	4	-	75%	1%
Total	1,771	2,569	73%	32%

Other Retail - Small Business Exposures

PD Range	EAD	Undrawn Commitment	EAD Weighted Average	
	RM million	RM million	LGD	Risk Weight
up to 0.5%	5,056	1,600	29%	16%
> 0.5 to 3%	2,127	180	36%	43%
> 3 to 10%	520	72	38%	61%
> 10%	986	28	42%	92%
100%	289	8	37%	152%
Total	8,978	1,888	33%	38%

Actual Loss and Expected Loss for Exposures under Foundation and Advanced IRB Approaches

Actual loss refers to net impairment loss allowance and direct write-off to the statement of profit or loss during the year. Expected loss (“EL”) represents model derived and/or regulatory prescribed estimates of future loss on potential defaults over a one-year time horizon. Comparison of the two measures has limitations because they are calculated using different methods. EL computations are based on LGD and EAD estimates that reflect downturn economic conditions and regulatory minimums, and PD estimates that reflect long run through-the-cycle approximation of default rates. Actual loss is based on accounting standards and represents the point-in-time impairment experience for the financial year.

	Actual Loss for the 12 months ended 31 December 2021 RM million	Regulatory Expected Loss (Non-defaulted) as at 31 December 2020 RM million
Corporate	179	343
Bank	-	2
Other Retail - Small Business	39	171
Retail	103	94
Total	321	610

Exposures Covered by Credit Risk Mitigation

	Eligible Financial Collateral RM million	Other Eligible Collateral RM million	Amount by which credit exposures have been reduced by eligible credit protection RM million
Standardised Approach			
Corporate	19	-	-
Sovereign & Central Bank	-	-	-
Public Sector Entities	-	-	293
Retail	18	-	-
Others	#	-	-
Total	37	-	293
Foundation IRB Approach			
Corporate	865	10,217	114
Bank	304	-	-
Total	1,169	10,217	114

Note:

- Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.
- Does not include collateral for exposures under Advanced IRB Approach and Specialised Lending.
“#” represents amount less than RM0.5 million

Counterparty Credit Risk Exposures

	RM million
Replacement Cost	637
Potential Future Exposure	1,695
Less: Effects of Netting	824
EAD under Current Exposure Method	1,508
Analysed by type:	
Foreign Exchange Contracts	832
Interest Rate Contracts	615
Equity Contracts	46
Gold and Precious Metals Contracts	-
Other Commodities Contracts	2
Credit Derivative Contracts	13
Less: Eligible Financial Collateral	154
Net Derivatives Credit Exposure	1,354

Note: Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.

Credit Derivatives

	Notional Amount	
	RM million	
	Bought	Sold
Credit Derivatives Swap		
for own credit portfolio	-	-
for intermediation activities	365	362
Total	365	362

Note: Credit derivatives for own credit portfolio include trading portfolio and hedges, if any.

MARKET RISK

Exposure, Risk Weighted Assets and Capital Requirement by Market Risk Type under Standardised Approach

	<u>Gross Exposure</u>		Risk Weighted Assets	Min. Capital Requirement
	Long Position	Short Position		
	RM million	RM million	RM million	RM million
Interest Rate Risk	26,638	24,755	1,023	82
Foreign Currency Risk	136	316	316	25
Equity Risk	5	-	6	#
Commodity Risk	-	-	-	-
Inventory Risk	-	-	-	-
Options Risk	1	1	16	2
Total	26,780	25,072	1,361	109

"#" represents amount less than RM0.5 million

EQUITY EXPOSURES

Equity exposures comprised investments in quoted and unquoted equity instruments.

Disclosures on accounting policy and fair value measurement of equity securities are the same with the audited financial statements for the financial year ended 31 December 2021.

Carrying Value of Equity Exposures

	RM million
Quoted equity exposure - Fair value through profit or loss ("FVTPL")	-
Unquoted equity exposure - Fair value through other comprehensive income ("FVOCI")	116
Quoted equity exposure - Associates	-
Unquoted equity exposure - Associates	-
Total	116

Realised and Unrealised Gains and Losses

	RM million
Gains/(losses) from disposal of equities	-
Unrealised gains/(losses) included in fair value reserve	103
Total	103

Interest Rate Risk in Banking Book

Based on a 100 bps parallel rise in yield curves on the OCBCM's exposure to major currency i.e. Malaysian Ringgit and US Dollar, net interest income is estimated to increase by MYR148.1 million, or approximately +9.4% of reported net interest income. The corresponding impact from a 100 bps decrease is an estimated reduction of MYR146.6 million in net interest income, or approximately -9.3% of reported net interest income.