BASEL II PILLAR 3 REPORT

BNP PARIBAS MALAYSIA BERHAD
(COMPANY NO. 201001034168 (918091-T))
(INCORPORATED IN MALAYSIA)

31 DECEMBER 2022

INTRODUCTION

The Pillar 3 Disclosure as at 31st December 2022 for BNP Paribas Malaysia Berhad ("BNPPMB") complies with the Bank Negara Malaysia's ("BNM") Risk Weighted Capital Adequacy Framework ("RWCAF") – Disclosure Requirements ("Pillar 3"), which is the equivalent of that issued by the Basel Committee on Banking Supervision ("BCBS") entitled "International Convergence of Capital Measurement and Capital Standards" (commonly referred to as Basel II).

BNP Paribas Malaysia Berhad is a subsidiary of BNP Paribas Group ("the Group"). Details about strategies, processes and organization of risk management within BNP Paribas group as well as its capital adequacy can be found in its Pillar 3 disclosure, as part of its Registration Document, at: https://invest.bnpparibas.com/en/registration-documents-annual-financial-reports".

1. SCOPE OF APPLICATION

The Pillar 3 Disclosures attached herewith relates only to BNP Paribas Malaysia Berhad ("the Bank"). BNP Paribas Malaysia Berhad is engaged in Corporate and Institutional Banking, including Islamic Banking Window ("IBW") business.

During the financial year, the Bank did not experience any restrictions or impediments in the transfer of funds or regulatory capital and did not report any capital deficiencies.

2. CAPITAL ADEQUACY

The Bank is adopting the following approaches to assess its regulatory capital requirements under BNM's RWCAF Pillar 1:

a) Credit risk (Standardised Approach);

b) Market risk (Standardised Approach); and

c) Operational risk (Basic Indicator Approach).

The Bank has implemented the Internal Capital Adequacy Assessment Process ("ICAAP") under BNM RWCAF Pillar 2, which is an internal assessment of the Bank's Risk Appetite and the adequacy of its capital supply in supporting current and future business activities. The aim of ICAAP is to ensure sufficient capital is available to absorb both regulatory capital requirements (i.e. Pillar 1 capital requirement) and any additional material risks inherent in the Bank's business activities.

The following table presents the minimum regulatory capital requirements to support the Bank's risk weighted assets.

31 December 2022	Gross Exposures	Net Exposures	Risk Weighted Assets	Capital Requirement
	RM'000	RM'000	RM'000	RM'000
(i) Credit Risk				
a) On-Balance Sheet Exposures				
Sovereign/Central Banks	3,226,281	3,226,281	171,602	13,728
Banks, Development Financial Insitutions & MDBs	79,234	79,234	15,847	1,268
Corporates	1,902,119	1,902,119	1,902,119	152,170
Other Assets	553,273	553,273	133,936	10,715
	5,760,907	**5,760,907**	**2,223,504**	**177,881**
b) Off-Balance Sheet Exposures*				
OTC Derivatives	2,595,986	1,522,666	501,070	40,086
Off balance sheet exposures other than OTC derivatives or credit derivatives	349,013	349,013	268,173	21,454
Defaulted Exposures	6,650	6,650	9,975	798
	2,951,649	**1,878,329**	**779,218**	**62,338**
Total On-Balance Sheet and Off Balance Sheet Credit Risk	**8,712,556**	**7,639,236**	**3,002,722**	**240,219**
(ii) Large Exposures Risk Requirement	-	-	-	-
(iii) Market Risk	**Long Position**	**Short Position**		
Interest Rate Risk	681,530	639,256	1,261,017	100,881
Foreign Currency Risk	93,078	1,683	93,078	7,446
Option Risk			32,652	2,612
Total Market Risk			**1,386,747**	**110,939**
(iv) Operational Risk	-	-	**203,294**	**16,263**
(v) Total Exposures, Risk Weighted Assets and Capital Requirements	**8,712,556**	**7,639,236**	**4,592,763**	**367,421**

Note:
**Credit equivalent of off-balance sheet items*

Table 1: Risk-weighted Assets and Capital Requirements

31 December 2021	Gross Exposures	Net Exposures	Risk Weighted Assets	Capital Requirement
	RM'000	RM'000	RM'000	RM'000
(i) Credit Risk				
a) On-Balance Sheet Exposures				
Sovereign/Central Banks	2,537,481	2,537,481	125,238	10,019
Banks, Development Financial Insitutions & MDBs	89,376	89,376	17,875	1,430
Corporates	1,302,676	1,302,676	1,302,676	104,214
Other Assets	83,661	83,661	34,055	2,724
	4,013,194	**4,013,194**	**1,479,844**	**118,387**
b) Off-Balance Sheet Exposures*				
OTC Derivatives	1,582,802	840,187	362,570	29,006
Off balance sheet exposures other than OTC derivatives or credit derivatives	305,710	305,710	271,515	21,721
Defaulted Exposures	-	-	-	-
	1,888,512	**1,145,897**	**634,085**	**50,727**
Total On-Balance Sheet and Off Balance Sheet Credit Risk	**5,901,706**	**5,159,091**	**2,113,929**	**169,114**
(ii) Large Exposures Risk Requirement	-	-	-	-
(iii) Market Risk	**Long Position**	**Short Position**		
Interest Rate Risk	544,910	510,945	1,021,853	81,748
Foreign Currency Risk	29,924	16,655	29,924	2,394
Option Risk			31,514	2,521
Total Market Risk			**1,083,291**	**86,663**
(iv) Operational Risk	-	-	**290,757**	**23,261**
(v) Total Exposures, Risk Weighted Assets and Capital Requirements	**5,901,706**	**5,159,091**	**3,487,977**	**279,038**

Note:
**Credit equivalent of off-balance sheet items*

Table 1: Risk Weighted Assets and Capital Requirements

3. CAPITAL STRUCTURE

For regulatory purposes, capital is categorised into Tier 1 and Tier 2 capitals which are described below:

- Tier 1 capital comprises issued and fully paid-up capital, retained earnings, statutory reserve and the deduction of certain regulatory adjustments.
- Tier 2 capital comprises collective assessment allowances, regulatory reserves and subordinated term loan.

The following table depicts the regulatory capital structure and capital adequacy ratios of the Bank:

	As at 31 December 2022	As at 31 December 2021
	RM'000	RM'000
Common Equity Tier 1 Capital/Tier 1 Capital:		
Paid-up share capital	650,000	650,000
Retained profits	255,828	210,278
Other disclosed reserves	22,780	17,017
	928,608	877,295
Less: Regulatory adjustments		
Deferred tax assets	(4,348)	(3,596)
55% of cumulative gains of FVOCI financial instruments	(96)	(965)
Hedging reserve	(4,073)	(893)
Regulatory reserve	(18,532)	(14,369)
Total Common Equity Tier 1 Capital/Tier 1 Capital	**901,559**	**857,472**
Tier 2 Capital:		
Expected credit losses	24,578	2,791
Subordinated term loan	386,766	387,635
Total Tier 2 Capital	**411,344**	**390,426**
Total Capital Base	**1,312,903**	**1,247,898**
Before deducting proposed dividend		
Common Equity Tier 1 Capital Ratio (1)	**19.630%**	**24.584%**
Tier 1 Capital Ratio (2)	**19.630%**	**24.584%**
Total Capital Ratio (3)	**28.586%**	**35.777%**
After deducting proposed dividend		
Common Equity Tier 1 Capital Ratio (1)	**18.532%**	**24.562%**
Tier 1 Capital Ratio (2)	**18.532%**	**24.562%**
Total Capital Ratio (3)	**27.488%**	**35.756%**

Note:
(1) Minimum Common Equity Tier 1 Capital Ratio is 4.5%
(2) Minimum Tier 1 Capital Ratio is 6.0%
(3) Minimum Total Capital Ratio is 8.0%

Table 2: Constituent of Eligible Capital and Capital Adequacy Ratios

4. RISK MANAGEMENT

Risk Management Framework

The framework objectives are:

- Define and maintain a framework (including policies, procedures, controls and systems), through which the Risk Appetite Statement is established, updated, communicated and monitored, under the leadership of the Bank's "Dirigeants Effectifs" and in close coordination with the business lines, which is reviewed and validated by the Board of Directors.

- Define and animate, in relation with the relevant stakeholders, a framework to anticipate the evolutions of the economic, industrial and regulatory environment. This framework notably encompasses, jointly with Finance, and in liaison with Asset and Liability Management & Treasury ("ALMT"):

    - the processes of identification of the material and emerging risks within the Bank.
    - the steering of the stress-testing framework, to support the performance of scenario-based projections of the risk profile of the Bank.
    - the steering of the Internal Capital Adequacy Assessment Process ("ICAAP") framework and the supervision of local ICAAPs, to manage the capital adequacy of the Bank.

- Ensure that the Bank's risk-taking policy and the risks generated by the Bank's activities comply and are compatible with its strategic objectives and its underlying Risk Appetite's qualitative statements and quantitative metrics.

- Inform and alert the management, the Bank's "Dirigeants Effectifs", and the Board of Directors on the status of the risks to which the Bank is exposed.

- Define, implement and animate, jointly with relevant stakeholders, the governance framing the decision-making process for decisions having an impact on the Bank's risk profile.

- Ensure the correct and swift implementation of the decisions taken.

- Develop and maintain processes, controls and systems to identify, measure, aggregate, monitor and report on risks in a reliable and comprehensive manner (for risks that are not explicitly within its remit, risk function will coordinate with the other concerned independent control functions to ensure the consistency of the risk measure, aggregation, monitoring and reporting framework).

- Define, jointly with the Compliance function, the framework for the validation of new activities and exceptional transactions and contribute to its effective implementation.

- Define, develop, implement and maintain, in collaboration with relevant stakeholders, the framework and associated resources related to the second line of defence over privacy and personal data protection, in compliance with the applicable laws and regulations.

- In coordination with the relevant stakeholders, define and integrate the environmental, social and governance risk factors into the risk management activities.

- Ensure compliance with banking regulations related to risk management activities. As an illustration, it implies to satisfy the following requirements from the regulators and supervisors regarding the non-limitative list:

    - Articulation between the Risk Appetite Statement and its strategy and business model.
    - Maintenance and performance of processes ensuring the adequacy between the capital and liquidity needs.
    - Production of reports and analyses on the risks to which the Bank is exposed. The production of the periodic regulatory reporting synthesis related to credit risk is done by Finance.

- Maintain, in coordination with the relevant stakeholders, the relationship with the Bank's regulators and supervisors to answer questions and address possible concerns regarding risks and risk management activities that are within Risk's remit;

- Steer the activities ensuring operational efficiency and effectiveness including its IT infrastructure and systems;

- Contribute to the steering of the framework supporting the development and the growth of the risk culture within the Bank.

Risk interacts on a permanent basis with the other control functions of the Bank, whether they are integrated (Compliance, Legal and Inspection Générale) or not (Finance), to aim at coordinating activities and actions.

Risk defines a set of level-2 and level-3 procedures that it maintains in line with legal, regulatory and internal evolutions.

The Bank has formulated its Risk Appetite, targets and orientation in accordance with orientation set up by the Group.

The Risk Appetite principles include environmental and social risk drivers. The Bank firmly believes in the need to preserve the natural environment and the importance of climate-related risks and opportunities. Accordingly, the BNPP Group commits to support the financing of the energy transition and more generally, the transition to a sustainable economy.This implies reducing the negative climate and environmental footprint of its activities (whether direct or indirect): impacts from its own operations, its supply chain and its banking activities (in terms GHG emissions, pollution other than GHG or natural capital degradation and biodiversity loss) as well as taking part in collective actions to further improve reporting and methodological initiatives for a better integration of the environment-related transition and physical risks in business and financial decisions.

Risk Governance

Committees have been established by the Chief Executive Officer ("CEO") and Country Management to oversee and approve key decisions affecting the business and Risk Appetite of BNPPMB. Amongst key committees are the Executive Risk Committee, Credit Committee, Assets and Liabilities Committee, Transaction Approval Committee, New Activity Validation Committee, Internal Control Committee, Compliance Committee, Client and Credit Support Committee, and Client Acceptance Committee.

The Board of Directors are responsible to set the Risk Appetite of BNPPMB. The Risk Appetite also takes into consideration additional factors such as licensing and regulatory conditions, infrastructure and platform readiness, product complexities and the overall organization of internal controls.

A core mission of credit control is to guarantee the conformity of the authorizations put in place with the credit decisions made and the management of the risk data input into risk systems used in the control and reporting of credit risk, that credit risks taken by the Bank are monitored correctly and to provide appropriate risk reporting as required by the Board Risk Management Committee and Management Committees.

These organisational and qualitative factors are complemented with other quantitative measures such as prudential limits, regulatory solvency ratios, stress test reviews and others as deemed appropriate by the Board.

Products approved by the Board of Directors are reviewed and assessed to ensure that they are within the core expertise and business strategy of BNPPMB, specifically in Corporate and Institutional Banking ("CIB") as well as within the defined Risk Appetite.

In addition to this, the Board of Directors approves limits and thresholds in the case of market risk limits and prudential limits thresholds to ensure that the risks are properly managed, monitored and reported.

The Board of Directors has the ultimate responsibility for the governance of risks at BNPPMB.

Outlined below are the roles and responsibilities of respective persons with regards to the risk management of the Bank:

Board of Directors ("BOD")

The BOD exercises essential duties are as follows:

- Determines, further to proposals by the "Dirigeants Effectifs" the strategy, internal control activities, and oversees their implementation.
- Examines and approves financial statements, supervises the management of the company and oversees the quality and reliability of financial information communicated to the shareholders and the markets; to this extent, it performs or requests the performance of any controls and checks it considers appropriate.
- Takes up any matter concerning the sound functioning of the Bank.
- Examines, assesses and controls regularly the efficiency of the framework of governance, notably the clear allocation of responsibilities, and of Internal Control, especially the procedures for reporting risks, and takes appropriate measures to remedy potential deficiencies it observes.
- Validates the Risk Appetite Statement, periodically approves and reviews strategies and policies surrounding the Bank's activities.
- Validates ICAAP in line with the Bank's strategy and its capital requirement.
- Reviews, at least once a year, proposals of budgets, of management reports and of various legal or regulatory reports.
- Special assignments that report the sequences of events and determine responsibilities of the employees involved in suspicious or fraudulent operations.
- Fact-finding and research assignments, aimed at anticipating risks or threats to which the Bank may be exposed.

Board Risk Management Committee ("BRMC")

- Ensure capital management policies are effectively integrated into the overall risk management framework.
- Recommend the Bank's overall risk strategy including Risk Appetite and oversee its implementation.
- Reviews and recommend the Bank's implementation of internal capital assessment via ICAAP and management which is aligned with the Bank's Risk Appetite and business plan.

Board Audit Committee ("BAC")

- Receive and assess the results of all audits and independent reviews including those relating to any risk management topics.
- To oversee on matters related to the internal and external audit functions, financial reporting, internal control system and ensuring checks and balances.

Board Technology Risk

- To oversee the management of information and communication technologies ("ICT") risk and other ancillary risks in ensuring key technology risks and critical technology operations including Information Technology ("IT") risk management policies, process and risk management framework are in place and functioning.

Board Nomination

- To oversees on matters related to the appointment of members of Board of Directors, Chief Executive Officer and in-scope officers/employees, including fit and proper assessment and performance evaluation.

Board Remuneration

- To oversee the remuneration framework of the Bank in order to be in line with the business and risk strategies, corporate values and long-term interests of the Bank as well as align with BNP Paribas Group Compensation policy.
- To oversee, on a confidential basis, the remuneration of the Directors, Senior Management (i.e. Chief Executive Officer), Senior Officers including Other Material Risk Taker (i.e. Chief Operating Officer, Chief Risk Officer, Chief Financial Officer, Chief Compliance Officer, Head of Internal Audit Malaysia, Head of Legal and Head of Global Markets Malaysia) and Shariah Committee members particularly on whether the remuneration remains appropriate vis-à-vis their contribution, taking into account the level of expertise, commitment and responsibilities undertaken.
- To oversee the overall governance concerning remuneration aspects of the Bank.

Shariah Committee

- Provides guidance to the Board and Management in discharging their duties in matters related to Shariah principles.

Management

The "Dirigeants Effectifs" are the Chief Executive Officer and the Chief Operating Officer. Operationally, the "Dirigeants Effectifs" take their main decisions with the support of relevant management committees and of the most relevant experts in the area under review.

The "Dirigeants Effectifs" are responsible for the global internal control framework. To fulfil these responsibilities and without prejudice of the ones of the Board of Directors, the "Dirigeants Effectifs":

- Validates the 3 years budget and forecast proposed by Business line heads.
- Set the main policies and procedures related to risk management.

- Directly oversee the Functions exercising independent controls and provide them with the resources enabling them to actually fulfil their responsibilities.
- Assess and periodically control the effectiveness of the Internal Control policies, procedures and framework and decides upon appropriate remediation actions further to potential deficiencies.
- Report to the Board or to its sub Committees on the functioning of the internal control framework.
- Special assignments that report the sequences of events and determine responsibilities of the employees involved in suspicious or fraudulent operations.

Key management committees are:

Executive Risk Committee ("ERC")
- Review and recommend risk management strategies, risk frameworks, risk policies, risk tolerance and Risk Appetite limits to the Board Risk Management Committee for endorsement.
- Ensure comprehensive risk identification and assessment.
- Ensure that infrastructure, resources and systems are in place for effective risk management and monitoring.
- Review reports on the Bank's risk exposure, risk portfolio composition and risk management activities to ensure the consistency with the Bank's the Risk Appetite and business plan.

Asset & Liability Committee ("ALCO")
- Ensure comprehensive assessment of capital adequacy is conducted at least annually or as and when it is required culminating in the internal capital level.
- Ensure effective monitoring of capital adequacy of the Bank to ensure compliance with both to regulatory and internal capital ratio.
- Review reports on the Bank's capital adequacy level.
- Receive reports on the Bank's risk exposure, risk portfolio composition and risk management activities to ensure the consistency with the Bank's the Risk Appetite and business plan.

Credit Committee
- To ensure that significant compliance related issues are discussed, impacts are identified and actions are planned and escalation occurs when necessary.

Compliance Committee
- To determine appropriate credit evaluation, review and monitoring including risk related to ESG.

Internal Control Committee
- To provide an overview of the Bank's permanent control framework and operational risks, and serves as the governance for a collegial analysis and decision process on these topics i.e. to validate the action plans needed to put identified risk areas under control, procedures, control plans and outputs, resources, other actions and means.

Risk Measurement

The risk measurement tools employed by the Bank are commonly used in market practices and commensurate with the size and complexity of the Bank's business operations.

Risk Reporting and Monitoring

The Management is responsible for timely monitoring and reporting of risk exposures against the established risk limits. There is a formal process for risk reporting to management and the ERC to facilitate the making of informed decisions and strategies.

5. CREDIT RISK

Credit risk is defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Evaluating accurately the probability of default and the expected recovery on the loan or receivable in the event of default are key components of credit quality assessment.

Credit risk should be seen as encompassing the following risks factors:

- Sovereign risk is the sum of all exposures to the central government and its various offshoots.
- Country risk is the sum of all exposures to obligors in a given country. Country risk reflects the Bank exposure to a given economic and political environment, which is taken into consideration when assessing counterparty quality. Country risk will not materialize as our bank strategy is for the Bank to be exposed mainly to domestic markets.
- Migration risk is the possible improvement or deterioration of borrower's credit standing, which migrates into another risk class or eventually default.
- Counterparty risk is the credit risk embedded in payment or transactions between counterparties. Those transactions include bilateral contracts such as over-the-counter derivatives contracts ("OTC"). The amount of this risk varies over time in line with changing market parameters which then impacts the replacement value of the relevant transactions or portfolio.

Risk Governance, Reporting and Monitoring

The Bank's lending activities are governed by the Bank's Credit Risk Policy which is subject to and fully adopts BNP Paribas Group's Global Credit Policy. The policy is underpinned by core principles related to compliance with the BNP Paribas Group's ethical standards, clear definition of roles and responsibilities and thorough analysis of risks. It is rolled down in the form of specific policies tailored to each type of business or counterparty.

In respect of its lending activities, the Bank structures the levels of credit risk it undertakes by setting limits on the amount of risk accepted in relation to one borrower, or groups of borrowers, and would abide by geographical and industry segments limit as and when defined at Group or Regional level.

A comprehensive risk monitoring system is organised around Control units, which are responsible for ensuring that lending commitments comply with the loan approval decision, that credit risk reporting data are reliable and that risks accepted by the Bank are effectively monitored. Daily exception reports are produced and various forecasting tools are used to provide early warnings of potential escalations of credit risks. The various monitoring levels, which generally reflect the organisation of discretionary lending authorities, are carried out up to the General Management Doubtful and Watch List Committee, under the supervision of Risk Function. This committee examines on a quarterly basis all sensitive or nonperforming loans in excess of a given threshold, for which it reviews and decides on the strategy towards the client, the rating and Global Recovery Rate ("GRR") and examines the adequacy of the impairment and recovery data based on a recommendation from the business lines, with Risk concurrence.

As part of the BNP Paribas Group's policy, each business line is required to make a monthly review, together with Risk, of all corporate, bank and sovereign loans in default to determine the amount of impairment loss, if any, to be recognised, either by reducing the carrying amount or by recording a provision for impairment, depending on the applicable accounting standards. The amount of the impairment loss is based on the present value of expected net recoveries, including from the realisation of collateral. Each and every change in provision must be examined locally by a committee between Business, Finance and Risk by physical meetings. Changes in provision exceeding local/regional delegation level are recommended to Head Office. In addition, at APAC level, a collective impairment is established while a dedicated local management committee is also established to provide the necessary oversight.

On a regular basis Corporate Credit Control in liaison with Chief Risk Officer ("CRO") produces a summary of main credit exposures, together with any existing exceptions and report to the Executive Risk Committee and Board of Directors through the Board Risk Management Committee. In addition, there would be regular review of the credit risk weighted assets by Extended EXCO.

Internal rating system

The Bank adopts the BNP Paribas Group's Corporate Credit Policy which formalises the rating principles and methodology to be used to qualify and quantify the credit risks of counterparty. The implementation of this policy contributes to the management, approval and monitoring, credit delegation, provisioning and pricing policy process and portfolio management of corporate credit risks within the Bank at counterparty level.

The BNP Paribas Group performs regular back-testing to ensure that the rating system is appropriate and robust. Under the rating system, there are 32 notches. 30 (ranging from 1+ to 10-) cover counterparties that are not in default with credit assessments ranging from 'excellent' to 'very concerning', and two relate to counterparties classified as Doubtful. Confirmation or amendments to Counterparty Ratings and the Global Recovery Rates applicable to each transaction of the counterparty are reviewed at inception and at least once a year as part of the credit approval process or annual credit review, drawing on the combined expertise of business line staff and Risk representatives, who have the final say. High quality tools have been developed to support the rating process, including analysis aids and credit scoring systems.

Portfolio policy

In addition to selecting individual risks and measuring the related exposure, the Bank follows a portfolio-based policy designed to diversify risks among borrowers and industries with a cautious approach to country risk. Concentrations of counterparty risks are closely monitored at regular intervals.

Credit Risk Mitigation

Credit risk exposure is mitigated via preventive risk management measures in limiting the activities in accordance with the Bank's Risk Appetite and periodic monitoring of credit exposures. Credit applications are evaluated by the originating business units before independently evaluated by risk management team.

Credit reviews on the corporate borrowers is performed on regular basis to complement the risk identification, early warnings detection as well as in ensuring creditability and financial performance of the corporate where applicable to protect the Bank's position in debt recovery.

Exposure to credit risk is also managed in part by obtaining collateral or right to call for collateral when certain exposure thresholds are exceeded, the right to terminate transactions upon the occurrence of unfavourable events, the right to reset the terms of transactions after specified time periods or upon the occurrence of unfavourable events, reducing part of its risks through risk participations and securitisation and entering into netting agreements with counterparties that permit the Bank to offset receivables and payables with such counterparties.

Where possible, the Bank takes collateral to mitigate its exposure. Collateral includes cash, marketable securities, structured products, moveable and immovable properties, trade receivables, inventory and other physical and financial collateral. The Bank may also take fixed and floating charges on the assets of borrowers. It has put in place policies governing eligibility of collateral. Where appropriate, collaterals are revalued periodically depending on the type of collaterals in order to ensure continued effective coverage.

The derivatives credit risk exposure is managed at BNP Paribas Group level as part of the overall credit limits with customers, together with potential exposures from market movements. Collateral or other security may be obtained to mitigate credit risk exposures on these instruments.

Netting arrangements

Netting is used by the Bank in order to mitigate counterparty credit risk associated with derivatives trading. The main instance where netting occurs is in case of trades termination: if the counterparty defaults, all the trades are terminated at their current market value, and all the positive and negative market values are summed to obtain a single amount (net) to be paid to or received from the counterparty. The balance ("close-out netting") may be collateralised with cash, securities or deposits.

The Bank also applies settlement netting in order to mitigate counterparty credit risk in case of currency-settlements. This corresponds to the netting of all payments and receipts between the Bank and one counterparty in the same currency to be settled in the same day. The netting results in a single amount (for each currency) to be paid either by the Bank or by the counterparty.

Transactions affected by this are processed in accordance with bilateral or multilateral agreements respecting the general principles of the national or international framework. The main forms of bilateral agreements are those issued on an international basis by International Swaps and Derivatives Association ("ISDA").

Risk Measurement

The Bank is adopting the Standardised Approach in calculating Credit Risk Risk Weight Assets ("RWA"). The standardised approach measures credit risk either pursuant to fixed risk weights which are predefined by the regulator, or through the application of external ratings.

Measurement of Expected Credit Loss for capital purposes

The determination of collective impairment, known as Expected Credit Loss ("ECL"), is calculated on all facilities and results from a two-step approach.

First the facilities have to be allocated to one of the three impairment stages by determining whether a significant increase in credit risk has occurred since initial recognition or whether the facility is defaulted. If that increase did occur, the facility is considered as being in Stage 2. If there was no significant credit risk increase, the facility remains in Stage 1.

Second, the collective provisioning of the facility, known as the expected credit loss is calculated: 12-month expected loss for all facilities in stage 1 and lifetime expected credit loss for all facilities in stage 2; facilities in stage 3 are covered by specific provisions.

The key inputs used for measuring ECL are probability of default ("PD"), loss given default ("LGD") exposure at default ("EAD") and effective maturity.

These figures are generally derived from internally developed statistical models and other historical data and they are adjusted to reflect probability-weighted forward-looking information.

PD is an estimate of the likelihood of default over a given time horizon. It is estimated as at a point in time. The calculation is based on statistical rating models, and assessed using rating tools tailored to the various categories of counterparties and exposures. These statistical models are based on market data (where available), as well as internal data comprising both quantitative and qualitative factors. PDs are estimated considering the contractual maturities of exposures and estimated prepayment rates. The estimation is based on current conditions, adjusted to take into account estimates of future conditions that will impact PD.

LGD is an estimate of the loss arising on default. It is based on the difference between the contractual cash flows due and those that the lender would expect to receive, taking into account cash flows from any collateral. The LGD models for secured assets consider forecasts of future collateral valuation taking into account sale discounts, time to realisation of collateral, cross-collateralisation and seniority of claim, cost of realisation of collateral and cure rates (i.e. exit from non-performing status). LGD models for unsecured assets consider time of recovery, recovery rates and seniority of claims. The calculation is on a discounted cash flow basis, where the cash flows are discounted by the original effective interest rate ("EIR") of the loan.

EAD is an estimate of the exposure at a future default date, taking into account expected changes in the exposure after the reporting date, including repayments of principal and interest, and expected drawdowns on committed facilities. The Bank's modelling approach for EAD reflects expected changes in the balance outstanding over the lifetime of the loan exposure that are permitted by the current contractual terms, such as amortisation profiles, early repayment or overpayment, changes in utilisation of undrawn commitments and credit mitigation actions taken before default. The Bank uses EAD models that reflect the characteristics of the portfolios.

The effective maturity is the expected date when the contract with the counterparty expires.

The Bank measures ECL considering the risk of default over the maximum contractual period (including extension options) over which the entity is exposed to credit risk and not a longer period, even if contact extension or renewal is common business practice. However, for financial instruments such as revolving credit facilities and overdraft facilities that include both a loan and an undrawn commitment component, the Bank's contractual ability to demand repayment and cancel the undrawn commitment does not limit the Bank's exposure to credit losses to the contractual notice period. For such financial instruments the Bank measures ECL over the period that it is exposed to credit risk and ECL would not be mitigated by credit risk management actions, even if that period extends beyond the maximum contractual period.These financial instruments do not have a fixed term or repayment structure and have a short contractual cancellation period.

The measurement of ECL is based on probability weighted average credit loss. As a result, the measurement of the loss allowance should be the same regardless of whether it is measured on an individual basis or a collective basis (although measurement on a collective basis is more practical for large portfolios of items).

Credit Concentration Risk
As outlined in the BNPP Global Credit policy adopted by BNPP MB, diversification of the Bank's portfolio is considered essential to sound risk management. In addition to the adoption of the Group's specific polices such as the Single Name Concentration Policy for Corporates, BNPPMB has also developed its own Single Counterparty Exposure Limit ("SCEL") policy and procedure, and Lending to Connected Parties Policy, that is to be read as a complement to this policy. In line with the Bank's yearly ICAAP document, the exposure to each sectors as defined by BNPP Group is being monitored on a periodic basis i.e. to be alerted if the credit exposures is beyond 25%.

5.1. Distribution of Credit Exposures

(i) The following table depicts the geographical distribution of the Bank's credit exposures, based on the country of incorporation or residence:

31 December 2022

Exposure Class	Malaysia	United Kingdom	France	Hong Kong	Singapore	Others	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereign/ Central Bank	3,226,281	-	-	-	-	-	3,226,281	3,226,281
Banks	16,641	27	718	411	11,425	50,012	79,234	79,234
Corporates	1,902,119	-	-	-	-	-	1,902,119	1,902,119
Other Assets	553,273	-	-	-	-	-	553,273	553,273
Commitments and Contingencies	1,883,162	1,961	925,981	11,633	77,641	51,271	2,951,649	1,878,329
	7,581,476	**1,988**	**926,699**	**12,044**	**89,066**	**101,283**	**8,712,556**	**7,639,236**

31 December 2021

Exposure Class	Malaysia	United Kingdom	France	Hong Kong	Singapore	Others	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereign/ Central Bank	2,537,481	-	-	-	-	-	2,537,481	2,537,481
Banks	6,336	4,320	9,546	4,333	12,227	52,614	89,376	89,376
Corporates	1,302,676	-	-	-	-	-	1,302,676	1,302,676
Other Assets	83,652	-	-	-	-	9	83,661	83,661
Commitments and Contingencies	1,247,015	2,682	539,509	2,749	25,343	71,214	1,888,512	1,145,897
	5,177,160	**7,002**	**549,055**	**7,082**	**37,570**	**123,837**	**5,901,706**	**5,159,091**

Table 3: Credit Exposures by Geographic Distribution

(ii) The following table depicts the Bank's credit exposures by sector analysis or industrial distribution:

31 December 2022

Exposure Class	Government & Central Banks	Finance, Insurance & Business Services	Manufacturing	Construction	Wholesale & Retail	Transport, Storage & Communication	Mining & Quarrying	Other Business Services	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereign/ Central Bank	3,226,276	5	-	-	-	-	-	-	3,226,281	3,226,281
Banks	-	79,234	-	-	-	-	-	-	79,234	79,234
Corporates	-	66,929	1,124,435	9,827	142,776	254,360	4,000	299,792	1,902,119	1,902,119
Other Assets	11,761	530,687	4,390	-	115	1,225	23	5,072	553,273	553,273
Commitments and Contingencies	-	2,607,977	251,830	13,529	36,661	21,113	2,324	18,215	2,951,649	1,878,329
	3,238,037	**3,284,832**	**1,380,655**	**23,356**	**179,552**	**276,698**	**6,347**	**323,079**	**8,712,556**	**7,639,236**

31 December 2021

Exposure Class	Government & Central Banks	Finance, Insurance & Business Services	Manufacturing	Construction	Wholesale & Retail	Transport, Storage & Communication	Mining & Quarrying	Other Business Services	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereign/ Central Bank	2,537,481	-	-	-	-	-	-	-	2,537,481	2,537,481
Banks	-	89,376	-	-	-	-	-	-	89,376	89,376
Corporates	-	30,000	662,000	2,000	139,665	153,322	12,767	302,922	1,302,676	1,302,676
Other Assets	7,324	61,264	1,424	-	11	16	15	13,607	83,661	83,661
Commitments and Contingencies	-	1,518,353	240,682	16,696	38,221	6,607	21,213	46,740	1,888,512	1,145,897
	2,544,805	**1,698,993**	**904,106**	**18,696**	**177,897**	**159,945**	**33,995**	**363,269**	**5,901,706**	**5,159,091**

Table 4: Credit Exposures by Sectorial Analysis or Industrial Distribution

(iii) The following table depicts the Bank's credit exposures analysed by residual contractual maturity analysis:

31 December 2022

Exposure Class	Sovereign/ Central Bank	Banks	Corporates	Other Assets	Commitments and Contingencies	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
< 1 year	3,196,023	15,690	519,829	534,806	1,549,862	5,816,210	5,014,146
> 1 - 5 years	-	-	233,294	1,331	1,151,904	1,386,529	1,169,525
Over 5 years	-	-	231,397	117	249,883	481,397	427,145
No Specific Maturity	30,258	63,544	917,599	17,019	-	1,028,420	1,028,420
	3,226,281	**79,234**	**1,902,119**	**553,273**	**2,951,649**	**8,712,556**	**7,639,236**

31 December 2021

Exposure Class	Sovereign/ Central Bank	Banks	Corporates	Other Assets	Commitments and Contingencies	Total On & Off Balance Sheet Gross Exposures	Total On & Off Balance Sheet Net Exposures
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
< 1 year	2,137,665	5,487	290,071	65,761	892,092	3,391,076	2,929,815
> 1 - 5 years	388,644	-	251,389	4,505	778,735	1,423,273	1,216,023
Over 5 years	-	-	221,308	61	217,685	439,054	364,950
No Specific Maturity	11,172	83,889	539,908	13,334	-	648,303	648,303
	2,537,481	**89,376**	**1,302,676**	**83,661**	**1,888,512**	**5,901,706**	**5,159,091**

Table 5 : Credit Exposures by Residual Contractual Maturity Analysis

5.2. Past Due and Impaired Loans, Advances and Financing

Loans are considered as past due once contractually agreed payments are due from the customers.

Impaired exposures comprise loans, advances and financing where individual identified impairment allowance has been raised. Impairment allowances are provisions in the Statement of Financial Position as a result of the charge against income statement for the incurred loss in the loans, advances and financing. An impairment allowance can be individually or collectively assessed.

The Bank assesses at each balance sheet date whether there is objective evidence that loans, advances and financing are impaired. Regular reviews are conducted to determine whether there is objective evidence of impairment on individual assessment.

For the loss allowance on financial investments, the Bank applies the MFRS9 'Financial Instruments'. The methodology is subject to a minimum loss allowance for non-credit impaired exposures and regulatory reserves of 1% of total credit exposures net of loss allowance for credit impaired exposure, in accordance with BNM requirements.

There is no past-due and impaired loans, advances and financing recorded for the Bank.

5.3. Credit Risk Assessment under Standardised Approach

In the assessment of credit risk under the Standardised Approach, the Bank uses ratings assigned by recognised External Credit Assessment Institutions ("ECAIs") in determining risk weight for certain exposure classes and are recognised by BNM in RWCAF.

The Bank uses ratings assigned by the following ECAIs:

a) Standard & Poor's Rating Services ("S&P");
b) Moody's Investors Service ("Moody's");
c) Fitch Ratings ("Fitch");
d) RAM Rating Services Berhad ("RAM");
e) Malaysian Rating Corporation Berhad ("MARC")

In general, the rating specific to the credit exposure is used i.e. the issuer rating. Each exposure class above must be assigned with rating in order to determine the risk weight percentage. If more than one rating is available for a specific counterparty, the selection criteria as set out under the Single and Multiple Assessment in BNM RWCAF are applied in determining relevant risk weight for the capital calculation. Where a rating is not available, the Bank follows the provisions stipulated under BNM RWCAF and deems the exposures as unrated.

The alphanumerical scale of each long term credit rating category by ECAIs and the relevant risk weight are prescribed under BNM RWCAF.

(i) Credit Exposure by Risk Weights

The following table depicts the credit risk exposure of the Bank by risk weight:

31 December 2022

Exposure Class	Sovereigns & Central Banks	Banks, MDBs, and FDIs	Insurance Cos, Securities & Fund Managers	Corporates	Other Assets	Total On & Off Balance Sheet Net Exposures	Total Risk Weighted Assets
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Risk Weights (%)							
0%	2,368,271	-	-	-	-	2,368,271	-
20%	858,010	1,356,189	-	-	524,172	2,738,371	547,674
50%	-	161,741	-	-	-	161,741	80,870
100%	-	-	27,309	2,307,793	29,101	2,364,203	2,364,203
150%	-	-	-	6,650	-	6,650	9,975
Total	**3,226,281**	**1,517,930**	**27,309**	**2,314,443**	**553,273**	**7,639,236**	**3,002,722**

31 December 2021

Exposure Class	Sovereigns & Central Banks	Banks, MDBs, and FDIs	Insurance Cos, Securities & Fund Managers	Corporates	Other Assets	Total On & Off Balance Sheet Net Exposures	Total Risk Weighted Assets
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Risk Weights (%)							
0%	1,911,291	-	-	-	-	1,911,291	-
20%	626,190	670,315	-	-	62,008	1,358,513	271,703
50%	-	94,122	-	-	-	94,122	47,061
100%	-	-	38,364	1,735,148	21,653	1,795,165	1,795,165
Total	**2,537,481**	**764,437**	**38,364**	**1,735,148**	**83,661**	**5,159,091**	**2,113,929**

Table 6: Credit Risk Exposure by Risk Weight

(ii) Credit Exposure by Ratings from External Credit Assessment Institution ("ECAI")

Corporate Exposures	Ratings of Corporate by Approved ECAIs					
Moody's	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated	
S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated	Total On & Off
Fitch	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated	Balance Sheet
RAM	AAA to AA3	A to A3	BBB+ to BB3	B to D	Unrated	Net Exposures
MARC	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated	
31 December 2022	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Insurance Cos, Securities Firms & Fund Managers	3,048	24,261	-	-	-	27,309
Corporates	-	-	-	-	2,314,443	2,314,443
Total	**3,048**	**24,261**	**-**	**-**	**2,314,443**	**2,341,752**
31 December 2021						
Insurance Cos, Securities Firms & Fund Managers	32,308	6,056	-	-	-	38,364
Corporates	-	-	-	-	1,735,148	1,735,148
Total	**32,308**	**6,056**	**-**	**-**	**1,735,148**	**1,773,512**

Table 7.1: Ratings of Insurance and Corporate Exposures by Approved ECAIs

Sovereign/Central Banks Exposures	**Ratings of Sovereigns and Central Banks by Approved ECAIs**						
Moody's	**Aaa to Aa3**	**A1 to A3**	**Baa1 to Baa3**	**Ba1 to B3**	**Caa1 to C**	**Unrated**	**Total On & Off**
S&P	**AAA to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ to BB-**	**CCC+ to D**	**Unrated**	**Balance Sheet**
Fitch	**AAA to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ to BB-**	**CCC+ to D**	**Unrated**	**Net Exposures**
31 December 2022	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**
Sovereign/Central Banks	-	3,226,281	-	-	-	-	3,226,281
31 December 2021							
Sovereign/Central Banks	-	2,537,481	-	-	-	-	2,537,481

Table 7.2: Ratings of Sovereigns and Central Banks Exposures by Approved ECAIs

Banks, Development Financial Insitutions & MDBs Exposures	**Ratings of Banking Institutions by Approved ECAIs**						
Moody's	**Aaa to Aa3**	**A1 to A3**	**Baa1 to Baa3**	**Ba1 to B3**	**Caa1 to C**	**Unrated**	
S&P	**AAA to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ to B-**	**CCC+ to D**	**Unrated**	**Total On & Off**
Fitch	**AAA to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ to B-**	**CCC+ to D**	**Unrated**	**Balance Sheet**
RAM	**AAA to AA3**	**A1 to A3**	**BBB+ to BBB3**	**BB1 to B3**	**C1 to D**	**Unrated**	**Net Exposures**
MARC	**AAA to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ to B-**	**C+ to D**	**Unrated**	
31 December 2022	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**
Banks, Development Financial Insitutions & MDBs	1,443,270	61,931	12,729	-	-	-	1,517,930
31 December 2021							
Banks, Development Financial Insitutions & MDBs	700,471	62,966	-	1,000	-	-	764,437

Table 7.3: Ratings of Banking Institutions Exposures by Approved ECAI

5.4. Credit Risk Mitigation Techniques under Standardised Approach

Credit risk mitigation in the form of acceptable collateral which may be bespoke in nature according to transaction and/or counterparty but shall always observe the following principles:

- Collateral must be of a high quality
- Liquid and/or availability of market price
- Unencumbered and legally enforceable.

31 December 2022	Gross Exposures before CRM	Exposures Covered by Guarantees/ Credit Derivatives	Exposures Covered by Eligible Financial Collateral	Exposures Covered by Other Eligible Collateral
	RM'000	RM'000	RM'000	RM'000
On-Balance Sheet Exposures:				
Sovereigns/Central Banks	3,226,281	-	-	-
Banks, Development Financial Institutions & MDBs	79,234	-	-	-
Corporates	1,902,119	-	-	-
Other Assets	553,273	-	-	-
	5,760,907	**-**	**-**	**-**
Off-Balance Sheet Exposures				
OTC Derivatives	2,595,986	-	1,073,320	-
Off-Balance Sheet Exposures other than OTC Derivatives or Credit Derivatives	349,013	-	-	-
Defaulted Exposures	6,650	-	-	-
	2,951,649	**-**	**1,073,320**	**-**
Total On and Off-Balance Sheet Exposures	**8,712,556**	**-**	**1,073,320**	**-**

31 December 2021	Gross Exposures before CRM	Exposures Covered by Guarantees/ Credit Derivatives	Exposures Covered by Eligible Financial Collateral	Exposures Covered by Other Eligible Collateral
	RM'000	RM'000	RM'000	RM'000
On-Balance Sheet Exposures:				
Sovereigns/Central Banks	2,537,481	-	-	-
Banks, Development Financial Institutions & MDBs	89,376	-	-	-
Corporates	1,302,676	-	-	-
Other Assets	83,661	-	-	-
	4,013,194	**-**	**-**	**-**
Off-Balance Sheet Exposures				
OTC Derivatives	1,582,802	-	742,617	-
Off-Balance Sheet Exposures other than OTC Derivatives or Credit Derivatives	305,710	-	-	-
	1,888,512	**-**	**742,617**	**-**
Total On and Off-Balance Sheet Exposures	**5,901,706**	**-**	**742,617**	**-**

Table 8: Credit Exposures by Credit Risk Mitigation

5.5. Off-Balance Sheet Exposure and Counterparty Credit Risk

Counterparty Credit risk arising from derivative transaction can be mitigated in several ways, including the use of:

a) Collateral, which may be liquidated immediately and used to satisfy the counterparty's obligations to the Bank upon closeout; and
b) Netting, which gives the Bank the right to close out and net all transactions under market standard master netting agreements.

The following table depicts disclosure of off-balance sheet and counterparty credit risk:

	31 December 2022				31 December 2021			
	Principal Amount	Positive Fair Value of Derivatives Contracts	Credit Equivalent Amount	Risk Weigthed Assets	Principal Amount	Positive Fair Value of Derivatives Contracts	Credit Equivalent Amount	Risk Weigthed Assets
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Direct Credit Substitutes	212,297	-	212,297	210,706	295,283	-	295,283	261,087
Transaction related contingent items	71,840	-	35,920	30,318	-	-	-	-
Short Term Self Liquidating trade related contingencies	-	-	-	-	723	-	145	145
Lending of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions (i.e. repurchase/reverse repurchase and securities lending/borrowing transaction	87,902	-	87,902	17,580	-	-	-	-
Foreign exchange related contracts								
One year or less	80,040,873	953,070	1,199,544	167,866	57,925,294	234,028	638,905	130,843
Over one year to five years	4,485,225	76,144	297,046	88,304	2,216,232	18,850	120,201	49,664
Over five years	551,633	19,202	84,474	23,913	573,928	4,964	55,373	25,297
Interest/Profit rate related contracts								
One year or less	20,397,682	56,084	54,127	12,067	13,592,482	36,385	54,052	19,030
Over one year to five years	36,243,053	334,401	746,770	171,239	28,981,380	243,913	546,410	109,026
Over five years	2,296,424	97,223	164,910	31,582	1,919,354	157,897	141,429	28,710
Credit Derivative Contracts								
One year or less	252,678	7,309	15,625	1,957	43,597	452	-	-
Over one year to five years	653,390	24,992	33,489	4,143	464,244	10,180	26,432	-
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	7,500	-	3,750	3,750	20,565	-	10,282	10,283
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	78,971	-	15,794	15,794	-	-	-	-
Any commitments that are unconditionally cancelled at any time by the bank without prior notice or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness	1,645,971	-	-	-	1,718,415	-	-	-
	147,025,439	**1,568,425**	**2,951,648**	**779,219**	**107,751,497**	**706,669**	**1,888,512**	**634,085**

	Principal Amount	Credit Equivalent Amount	Risk Weigthed Assets	Principal Amount	Credit Equivalent Amount	Risk Weigthed Assets
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Credit Derivatives Contracts in clients' intermediation activities						
Credit default swaps - Protection bought	469,088	44,320	6,100	285,450	20,809	-
Credit default swaps - Protection Sold	436,980	4,794	-	222,392	5,623	-
	906,068	**49,114**	**6,100**	**507,842**	**26,432**	**-**

Table 9: Off-Balance Sheet and Counterparty Credit Risk

6. MARKET RISK

Market risk is the risk of incurring a loss of value due to adverse trends in market prices or parameters, whether directly observable or not.

Observable market parameters include, but are not limited to exchange rates, prices of securities and commodities (whether listed or obtained by reference to a similar asset), prices of derivatives, and other parameters that can be directly inferred from them, such as interest rates, credit spreads, volatilities and implied correlations or other similar parameters.

Non-observable factors are those based on working assumptions such as parameters contained in models or based on statistical or economic analyses, non-ascertainable in the market.

Market Liquidity is an important component of market risk. In times of limited or no liquidity, instruments or goods may not be tradable or may not be tradable at their estimated value. This may arise, for example, due to low transaction volumes, legal restrictions or a strong imbalance between demand and supply for certain assets.

Market risk should be seen as encompassing the following risks factors:

- Foreign exchange risk is the risk that the value of an instrument will fluctuate due to changes in foreign exchange rates,
- Interest rate risk in trading book is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates,
- Equity risk arises from changes in the market prices and volatilities of equity shares and/or equity indices,
- Commodity risk arises from changes in the market prices and volatilities of commodities and/or commodity indices,
- Credit spread risk arises from the change in the credit quality of an issuer and is reflected in changes in the cost of purchasing protection on that issuer,
- Option risk is the exposure to any and all of the various type of market risk which can be significantly magnified by the presence of explicit or embedded options in instruments and portfolios.

Hedging and Mitigation

Recognising the exposure to the above, the Bank may make use of derivative financial instruments as part of its overall risk management strategy. The purpose of such hedging activities is to ensure the market making activities remains within the prescribed risk parameters and to further strengthen the overall framework for managing risks associated with market making activities.

Risk Governance

The Executive Risk Committee ("ERC") and Asset & Liability Committee ("ALCO") supports the BRMC in the market and liquidity risk management oversight. These committees review the Bank's market and liquidity risk management framework and policies, aligns risk management with business strategies and planning and recommends actions to ensure that the risk remains within established risk tolerance level.

Policies and Approaches

The market risk framework of the Bank establishes the base standards on management of market and liquidity risks that sets out policies at a more detailed level.

Risk Measurement

The Bank's primary tool for the systematic measuring and monitoring of market risk is the Value at Risk ("VaR") calculation, which is measured and monitored at the regional level by lines of businesses. VaR is an estimate of the expected loss in the value of the various regional lines of businesses' activities, where the Bank's activities are rolled up into, over a one-day time horizon. VaR allows for a consistent and uniform measure of market risk across all applicable products and activities. To calculate VaR, the Bank uses historical simulation, which measures risk across instruments and portfolios in a consistent and comparable way. This approach assumes that historical changes in market values are representative of future changes. The simulation is based upon date for the previous twelve months.

The VaR of the Bank are measured based on one-day time horizon and at 99% confidence level. It represents the correlation and consequent diversification effects between risk types and portfolio types across trading and non-trading businesses. However, the use of this approach does not prevent losses outside of these limits in the event of more significant market movements.

The aggregate VaR includes the diversification effect of imperfect or negative correlations between certain risk types. Therefore the aggregate VaR can be lower than the sum of individual risk types on the same day (e.g. year end).

In practice, the actual trading results will differ from the VaR calculation and, in particular, the calculation does not provide a meaningful indication of profit or loss in stressed market conditions. To determine the reliability of the VaR models, actual outcomes are monitored regularly to test the validity of the assumptions and the parameters used in the VaR calculation.

Overarching internal market Risk Appetite will be governed by the entity level VaR limit which will be reviewed by the Board Risk Management Committee from time to time.

Besides VaR, other non-statistical limits such as basis point value and net open positions are used as market risk tools to limit the risk to which the businesses can be exposed to.

In addition, based on the approved interest rate and fx delta market risk limits, the maximum market risk capital charge based on the Standardised Approach is determined internally for Interest Rate Risk, Foreign Exchange and Option Risk.

For Credit Trading activities, reference entity credit rating below a certain rating will require specific approval from the relevant Transaction or Management Committee.

Risk Reporting and Monitoring

With regard to Market Risk Monitoring, the Risk function monitors the risks from two business lines : Global Markets ("GM") and Asset and Liability Management – Treasury ("ALMT").

The products under GM business line contains :
- Foreign Exchange, Credit, Interest Rate hedging
- Structured derivatives and investment products
- Debt Capital Market issuances and underwriting

The products under ALMT business line are mainly banking book exposures.

The Risk function produces daily market risk limit monitoring reports. Each report will compare end of trading day risk utilizations with the limits defined for each of the trading activities.

Regulatory Capital Treatment

The Bank is adopting the Standardised Approach in calculating market risk RWA.

The following table depicts disclosure of market risk capital requirements:

	As at 31 December 2022 Standardised Approach RM'000	As at 31 December 2021 Standardised Approach RM'000
Capital charge requirement for		
Interest Rate Risk	100,881	81,748
Foreign Exchange Risk	7,446	2,394
Options	2,612	2,521
Total	**110,939**	**86,663**

Market risk related to banking activities

- Equity risk in the banking book

There is no Equity Risk in the banking book recorded for the Bank.

- Interest rate risk in the banking book

Interest Rate Risk in the Banking Book ("IRRBB") is the risk of incurring a loss as a result of mismatches in interest rates, maturities or nature between assets and liabilities. For banking activities, IRRBB arises in non-trading portfolios and primarily relates to global interest rate risk.

Interest rate risk in the Banking Book for the Bank is monitored and kept within defined bounds. It is managed at local level under the supervision of the Group. The Bank monitors and assesses the Interest Rate risk in the banking book exposures through the earnings and the economic value perspectives. The earnings perspective focuses on the impact of interest or benchmark rate changes on near-term earnings while the economic value perspective focuses on the impact of interest or benchmark rate changes on the present value of the bank's long-term net cash flow. The two approaches provide different but complementary perspectives on the possible impact of interest or benchmark rates movements on a banking institution's financial position.

The following table depicts the sensitivity of the Bank's positions in banking book to interest rate changes:

	As at 31 December 2022 Increase / (Decline) 200 basis points (Parallel Shifts) RM'000	As at 31 December 2021 Increase / (Decline) 200 basis points (Parallel Shifts) RM'000
Impact on Earnings		
MYR	45,203	23,832
USD	8,695	1,544
Others	(385)	7,090
Total	**53,513**	**32,466**
Impact on Economic Value		
MYR	17,969	(343)
USD	16,942	10,551
Others	844	61,748
Total	**35,755**	**71,956**

7. OPERATIONAL RISK

Operational risk is the risk of incurring a loss due to inadequate or failed internal processes, or due to external events, whether deliberate, accidental or natural occurrences. Management of operational risk is based on an analysis of the "cause – event – effect" chain.

Internal processes giving rise to operational risk may involve employees and/or IT systems. External events include, but are not limited to floods, fire, earthquakes and terrorist attacks. Credit or market events such as default or fluctuations in value do not fall within the scope of operational risk.

Operational risk encompasses fraud, human resources risks, legal risks, non-compliance risks, tax risks, information system risks, conduct risks (risks related to the provision of inappropriate financial services), risk related to failures in operating processes, including loan procedures or model risks, as well as any potential financial implications resulting from the management of reputation risks.

Risk Governance

Operational Permanent Control ("OPC") comprises two headcounts reporting locally to the COO and has oversight responsibility over all the operational risks management activities of the bank through the coordination with the Regional Operations Permanent Control which provide support to BNP Paribas Malaysia Berhad. OPC's main tasks include:

- Managing the implementation of all aspects of operational permanent control, including implementation of processes, tools and systems to identify, assess, measure, manage, monitor and report risks;
- Assisting in the development of and manage processes to identify and evaluate operational areas' risks and risk and control self-assessments;
- Assisting in the process for developing risk policies and procedures;
- Monitoring and closing all operational risk issues.

Policies and Approaches

The following policies adopted in managing the Bank's operational risk:

Permanent Control Operational Risk Measurement and Management Applicable Organizational Framework for CIB; CIB Instructions for Historical Operational Risk Incidents Management; and CIB Instructions for the escalation of fraud to CIB Compliance & Control.

Risk Measurement

Controls

The Bank manages operational risk based on a Group-wide consistent framework that enables us to determine our operational Risk Appetite in comparison to our local Risk Appetite and to define local risk mitigating measures and priorities. The Bank applies the following techniques and tools to efficiently manage the operational risk:

- Perform Risk Assessment bottom-up ‘‘self-assessments’’ resulting in a specific operational Risk Appetite for the back office operations, middle office operations and supporting departments highlighting the areas with potential risk.
- Capture operational controls and test steps in the bank’s tool i.e. Operations Risk monitoring Unified System (“ORUS”) for the monthly control checks.
- Operational incidents are captured in the bank’s tool i.e. “360” Incident Reporting System database.
- Operational incidents are updated at the monthly Executive Risk Committee and quarterly Board Risk Management Committee.
- Audit recommendations action plan are tracked and closed.

Risk Reporting and Monitoring

Exception reports will be produced on a regular basis, highlighting material operational risk related issues to ERC and BRMC for risk monitoring and appropriate level of management decision making.

Regulatory Capital Treatment

The Bank is adopting the Basic Indicator Approach in calculating the operational risk RWA.

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Attestation by Chief Executive Officer pursuant to BASEL II – Pillar 3 Disclosures as at 31 December 2022

I hereby confirm to the best of my knowledge that the Pillar 3 disclosures for the financial period ended 31 December 2022 have been prepared in accordance with Bank Negara Malaysia's Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and the Pillar 3 disclosures are consistent with the manner that the risks are assessed and managed, and are not misleading in any particular way.

I also acknowledge that the Pillar 3 disclosures have undergone an extensive review process by the Chief Financial Officer and Chief Risk Officer, thereafter validated by the Chief Operating Officer.

Anthony Lo
Chief Executive Officer

Date : 12 April 2023

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