

Deutsche Bank (Malaysia) Berhad
(Company No. 199401026871 (312552-W))
(Incorporated in Malaysia)

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Basel II Pillar 3 Report

31 December 2022



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Introduction

Bank Negara Malaysia (“BNM”) announced a two-phase approach for implementing the standards recommended by the Bank for International Settlement set out in “International Convergence of Capital Measurement and Capital Standards: A Revised Framework” (Basel II) in Malaysia.

In the first phase, banking institutions are required to adopt the Standardised Approach for credit risk by the end of 2008. In the second phase, qualified banking institutions are allowed to migrate directly to the Internal Rating-Based approach (“IRB Approach”) in January 2010. Banks on the Standardised Approach are not mandated to migrate to the IRB Approach.

Deutsche Bank (Malaysia) Berhad (“the Bank”) operates under the BNM’s Risk Weighted Capital Adequacy Framework (Basel II – Risk Weighted Assets) (“RWCAF”) and Capital Adequacy Framework (Capital Components). The computation of the risk weighted assets is consistent with Pillar 1 requirements set out by the Basel Committee on Banking Supervision (“BCBS”) and the Islamic Financial Services Board (“IFSB”) in their respective documents – “International Convergence of Capital Measurement and Capital Standards: A Revised Framework” issued in June 2006 and the “Capital Adequacy Standard” issued in December 2005. BNM had proposed some customisations to the BCBS specification in an effort to avoid under estimation of risk within the industry as well as to ensure suitability of the framework in the local environment.

The capital adequacy ratios of the Bank are computed in accordance with BNM’s Capital Adequacy Framework (Capital Components and Basel II – Risk-weighted Assets) reissued on 09 December 2020. The Bank have adopted the Standardised Approach for Credit Risk and Market Risk, and the Basic Indicator Approach for Operational Risk. The minimum regulatory capital adequacy ratios before including capital conservation buffer and countercyclical capital buffer (“CCyB”) are 4.5% for CET1 Capital Ratio, 6.0% for Tier 1 Capital Ratio and 8.0% for Total Capital Ratio.

The CCyB which is in a range of between 0% and 2.5% is not a requirement for exposure in Malaysia yet but may be applied by regulators in the future.

The information provided herein has been reviewed and verified by competent independent internal parties and certified by the Bank’s Chief Executive Officer. The information is not audited as there is no requirement for external auditing of these disclosures under the BNM’s RWCAF. The Pillar 3 Disclosure will be published in the Bank’s website, www.db.com/malaysia.

1 Scope of Application

Deutsche Bank (Malaysia) Berhad and its subsidiaries (“DBMB Group”) are incorporated and domiciled in Malaysia. DBMB Group is principally engaged in all aspect of banking and related financial services which includes Islamic Banking Window (“IBW”) business.

The principles of consolidation used for regulatory capital purpose are not identical to those used for DBMB Group’s financial statements, which are prepared in accordance with the Malaysian Financial Reporting Standards (“MFRS”), International Financial Reporting Standards and the Companies Act, 2016 in Malaysia. The subsidiary companies of the Bank, which are incorporated in Malaysia, are consolidated with the financial statements of the Bank. The accounting policy for consolidation is provided in Note 2(a) to the Financial Statements.

2 Capital Adequacy

2.1 Deutsche Bank (Malaysia) Berhad’s Approach

The Bank manages risk and capital through a framework of principles, organisational structures, as well as measurement and monitoring processes that are closely aligned with the activities of the Bank’s divisions.

The Deutsche Bank Group (“DB Group”) Treasury function manages the Bank’s capital at group level and locally in each region. The allocation of financial resources, in general, and capital, in particular, favors business portfolios with the highest positive impact on the Bank’s profitability and shareholder value.

Regional capital plans covering the capital needs of DB Group’s branches and subsidiaries are prepared on an annual basis and presented to the DB Group Investment Committee (“GIC”). At a country level, capital is maintained on the basis of the local regulator’s requirements. It is overseen by the local Asset and Liability Committee (“ALCO”). Its mandate is to manage capital, funding, and liquidity risk.

2.2 Risk Weighted Assets and Capital Requirements

	2022		2021	
	Risk Weighted Assets RM'000	Min Capital Requirement at 8% RM'000	Risk Weighted Assets RM'000	Min Capital Requirement at 8% RM'000
Bank				
Credit Risk	4,868,323	389,466	4,640,612	371,249
Market Risk	1,970,009	157,601	1,815,354	145,228
Operational Risk	759,436	60,755	802,999	64,240
Total	7,597,768	607,822	7,258,965	580,717
Islamic Banking Window				
Credit Risk	-	-	-	-
Market Risk	-	-	-	-
Operational Risk	4,512	361	4,318	345
Total	4,512	361	4,318	345

2 Capital Adequacy (continued)

2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 1 - Risk Weighted Capital Ratio and Tier 1 capital

	2022		2021	
	Total Capital Ratio	CET1 / Tier 1 Capital Ratio	Total Capital Ratio	CET1 / Tier 1 Capital Ratio
Deutsche Bank (Malaysia) Berhad	24.728%	24.102%	24.431%	23.761%
Islamic Banking Window	783.023%	783.023%	799.930%	799.930%

Table 2 – Risk weighted assets and capital requirements for credit risk (2022)

31-12-2022

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000	RM'000	RM'000
<i>On-Balance Sheet Exposures</i>				
Sovereigns/Central Banks #	3,682,896	3,571,134	-	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	445,188	445,188	193,328	15,466
Insurance Companies, Securities Firms and Fund Managers	-	-	-	-
Corporates	1,382,837	1,382,837	1,375,259	110,021
Regulatory Retail	-	-	-	-
Residential Mortgages	2,278	2,278	797	64
Higher Risk Assets	-	-	-	-
Other Assets	888,941	888,941	887,712	71,016
Equity Exposure	13,033	13,033	13,263	1,061
Defaulted Exposures	1,036	1,036	1,036	83
<i>Total On-Balance Sheet Exposures</i>	<i>6,416,209</i>	<i>6,304,447</i>	<i>2,471,395</i>	<i>197,711</i>
<i>Off-Balance Sheet Exposures</i>				
OTC Derivatives	1,886,035	1,275,384	717,280	57,382
Credit Derivatives	-	-	-	-
Direct Credit Substitutes	25	25	25	2
Transaction related contingent Items	382,689	377,565	327,340	26,187
Short Term Self Liquidating trade related contingencies	18,937	18,937	18,937	1,515
Other commitments, such as formal standby facilities and credit lines	1,333,347	1,333,347	1,333,347	106,668
Defaulted Exposures	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>3,621,033</i>	<i>3,005,258</i>	<i>2,396,929</i>	<i>191,754</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>10,037,242</i>	<i>9,309,705</i>	<i>4,868,324</i>	<i>389,465</i>

* The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

Under Risk Weighted Capital Adequacy Framework (RWCAF), exposures to the Federal Government of Malaysia, Bank Negara Malaysia, overseas federal governments and central banks of their respective jurisdictions are accorded a preferential sovereign

2 Capital Adequacy (continued)

2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 2.1 - Risk weighted assets and capital requirements for credit risk (2021)

31-Dec-2021

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
Credit Risk	RM'000	RM'000	RM'000	RM'000
<i>On-Balance Sheet Exposures</i>				
Sovereigns/Central Banks #	5,009,904	4,959,181	-	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	580,586	580,586	249,461	19,957
Insurance Companies, Securities Firms and Fund Managers	-	-	-	-
Corporates	1,567,867	1,567,867	1,531,220	122,498
Regulatory Retail	-	-	-	-
Residential Mortgages	2,795	2,795	978	78
Higher Risk Assets	-	-	-	-
Other Assets	751,038	751,038	749,683	59,974
Equity Exposure	15,816	15,816	16,046	1,284
Defaulted Exposures	1,416	1,416	1,416	113
<i>Total On-Balance Sheet Exposures</i>	<i>7,929,422</i>	<i>7,878,699</i>	<i>2,548,804</i>	<i>203,904</i>
<i>Off-Balance Sheet Exposures</i>				
OTC Derivatives	1,581,248	1,228,227	720,480	57,638
Credit Derivatives	-	-	-	-
Direct Credit Substitutes	-	-	-	-
Transaction related contingent Items	285,005	280,281	265,213	21,217
Short Term Self Liquidating trade related contingencies	23,707	23,707	23,370	1,870
Other commitments, such as formal standby facilities and credit lines	1,082,745	1,082,745	1,082,745	86,620
Defaulted Exposures	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>2,972,705</i>	<i>2,614,960</i>	<i>2,091,808</i>	<i>167,345</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>10,902,127</i>	<i>10,493,659</i>	<i>4,640,612</i>	<i>371,249</i>

* The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

Under Risk Weighted Capital Adequacy Framework (RWCAF), exposures to the Federal Government of Malaysia, Bank Negara Malaysia, overseas federal governments and central banks of their respective jurisdictions are accorded a preferential sovereign risk weight of 0%.

2 Capital Adequacy (continued)

2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 3 – Risk weighted assets and capital requirements for market risk (2022)

31-12-2022

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000	RM'000	RM'000
Market Risk (Standardised approach)	Long Position	Short Position		
Interest Rate Risk	106,894,931	105,184,029	1,221,900	97,752
Foreign Currency Risk	219,176	233,275	233,273	18,662
Options	-	6,109	514,836	41,187
	107,114,107	105,423,413	1,970,009	157,601

Table 3.1 - Risk weighted assets and capital requirements for market risk (2021)

31-Dec-2021

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000	RM'000	RM'000
Market Risk (Standardised approach)	Long Position	Short Position		
Interest Rate Risk	79,384,122	78,375,087	881,454	70,516
Foreign Currency Risk	706,900	282,886	706,900	56,552
Options	26,021	-	227,000	18,160
	80,117,043	78,657,973	1,815,354	145,228

For interest rate risk, the gross exposures represent the sum of notional and mark-to-market value.

For foreign currency risk, the gross exposures represent net open position.

For options, the gross exposures represent net market value of option portfolio.

Table 4 – Risk weighted assets and capital requirements for operational risk (2022)

31-12-2022

RISK TYPE	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000
Operational Risk	759,436	60,755

* The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

2 Capital Adequacy (continued)

2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 4.1 - Risk weighted assets and capital requirements for operational risk (2021)

31-Dec-2021

RISK TYPE	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000
Operational Risk	802,999	64,240

* The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

Table 5 – Risk weighted assets and capital requirements arising from Large Exposure Risk

31-12-2022 & 31-12-2021

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
	RM'000	RM'000	RM'000	RM'000
Large Exposures Risk Requirements	-	-	-	-

The Bank does not have any capital requirement for Large Exposure Risk as there is no amount in excess of the lowest threshold arising from equity holdings as specified in BNM's RWCAF.

2.3 Capital Structure

2.3.1 Main Features of Capital Instruments

The Bank's total regulatory capital is made up of Tier 1 and Tier 2 capital and the sum of Tier 1 and Tier 2 capital is also referred to as Total Capital.

Tier 1 capital consists primarily of ordinary paid-up share capital and retained profits less deferred tax assets.

Share capital is the issued and fully paid share capital and there is no obligation to pay dividend to the shareholders. However, as per DB Group internal policy, all distributable profits according to local generally accepted accounting principles ("GAAP") of a subsidiaries that have not been previously approved for retention under a capital request, must be remitted as a dividend to the parent company and up the legal entity chain to the ultimate parent to support DB Group's dividend capacity.

Tier 2 capital consists of expected credit losses and regulatory reserve.

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Deferred tax assets are excluded from the computation of the Bank's capital base.

2 Capital Adequacy (continued)

2.3 Capital Structure (continued)

2.3.2 Components of Capital

Table 6 – Components of Tier 1 and Tier 2 capital:

	Group and Bank	
	31-Dec-22 RM'000	31-Dec-21 RM'000
Tier 1 capital		
Paid-up share capital	531,362	531,362
Fair value reserves	(4,949)	(3,898)
Retained profits	1,328,780	1,222,653
Less: Deferred tax assets	(23,986)	(25,283)
Total Common Equity Tier 1 / Tier 1 Capital	1,831,207	1,724,834
Tier 2 Capital		
Expected credit losses	2,560	3,599
Regulatory Reserve	45,000	45,000
Total Capital	1,878,767	1,773,433
Common equity tier 1 / Tier 1 Capital Ratio	24.102%	23.761%
Total capital ratio	24.728%	24.431%

3 Risk Management

3.1 Risk and Capital Management

Risk Management Framework

The risk management at the Bank is integral to DB Group's risk management framework and processes.

The Bank's business model requires to identify, assess, measure, aggregate and manage risks, and to allocate capital among businesses. Risk and capital are managed via a framework of principles, organisational structures and measurement and monitoring processes that are closely aligned with the activities and organisational structure of the Bank:

- Core risk management responsibilities are embedded in the Bank's local Management Board and delegated to senior risk management committees responsible for execution and oversight. The local Management Board regularly monitors the risk and capital profile.
- The Bank operate a Three Lines of Defence ("3LoD") risk management model. The First Line of Defence ("1st LoD") are all the business divisions and service providing infrastructure areas (i.e. Group Technology, Operations and Corporate Services) who are the "owners" of the risks. The Second Line of Defence ("2nd LoD") are all the independent risk and control infrastructure functions. The Third Line of Defence ("3rd LoD") is Group Audit, which assures the effectiveness of the controls. All 3LoD are independent of one another and accountable for maintaining structures that ensure adherence to the designed principles at all levels.
- Risk strategy is approved by the Bank's local Management Board on an annual basis and is defined based on the Risk Appetite and Strategic and Capital Plan in order to align risk, capital and performance targets.
- Cross-risk analysis reviews are conducted to validate that sound risk management practices and a holistic awareness of risk exist.
- All material risk types are centrally managed via risk management processes. Modeling and measurement approaches are to assess risk in terms of capital demand. Reputational risk and model risk are implicitly covered in DB Group's economic capital framework, primarily within operational and strategic risk.
- Monitoring, stress testing tools and escalation processes are in place for key capital and liquidity thresholds and metrics.
- Systems, processes and policies are critical components of the risk management capability. The Bank has a sound & efficient risk infrastructure in place. The Board Risk Management Committee ("BRMC") of the Bank regularly reviews reports from the respective divisions and is made aware of the risk exposure of the Bank and its ongoing management at each meeting.

Risk Governance

- The Bank's operations are regulated and supervised by BNM. Such regulation focuses on licensing, capital adequacy, liquidity, risk concentration, conduct of business as well as organisational and reporting requirements. The European Central Bank in connection with the relevant authorities of European Union ("EU") members which joined the Single Supervisory Mechanism via the Joint Supervisory Team act in cooperation as DB Group primary supervisors to monitor the DB Group's compliance with the German Banking Act and other applicable laws and regulations as well as the Capital Requirements Regulation ("CRR") / Capital Requirements Directive ("CRD") 4 framework and respective implementations into German law.

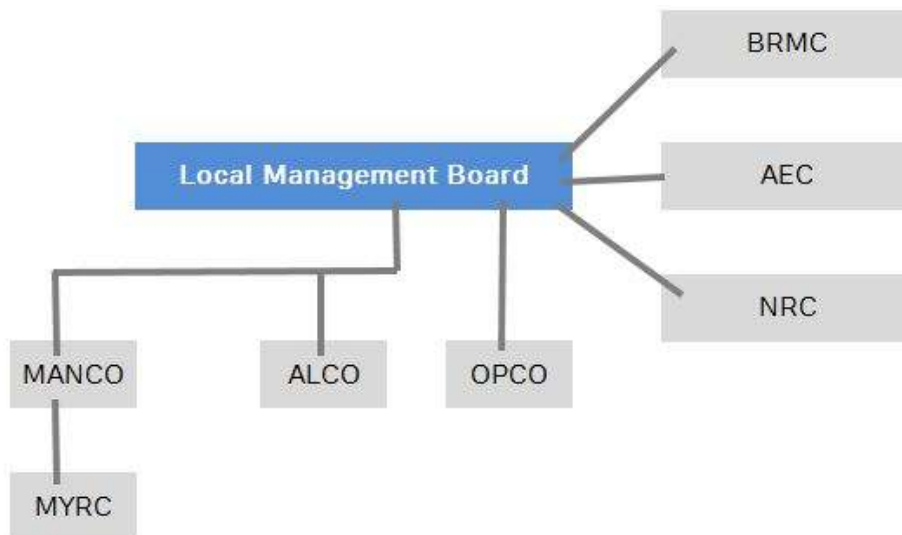
3 Risk Management (continued)

3.1 Risk and Capital Management (continued)

Risk Governance (continued)

- Several layers of management provide cohesive risk governance.
- The local Management Board is aware and kept regularly informed on special developments in the risk situation, risk management and risk controlling, as well as on the Bank’s reputation and material litigation cases.
- The local Management Board is responsible for managing the Bank in accordance with the law, the Articles of Association as well as its Constitution and Terms of Reference with the objective of creating sustainable value in the interest of the company, thus taking into consideration the interests of the shareholders, employees and other stakeholders.
- The local Management Board is responsible for establishing a proper business organisation, encompassing an appropriate and effective risk management.

The following functional committees are central to the management of risk at the Bank:



BRMC = Board Risk Management Committee
 AEC = Audit and Examination Committee
 NRC = Nominating and Remuneration Committee
 MANCO = Management Committee
 MYRC= Malaysia Risk Council
 ALCO = Asset and Liability Committee
 OPCO = Operations Committee

The Bank’s Head of Risk oversees the management of all credit, market, operational and liquidity risks as well as the comprehensive control of risk. He also chairs the Malaysia Risk Council, which is the key local approval body.

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3 Risk Management (continued)

3.1 Risk and Capital Management (continued)

Risk Culture

DB Group actively takes risks in connection with its business and generates risks as part of its day-to-day business operations. In this context, risk refers to the potential of a shortfall in expected results driven by the uncertainty about future developments. It can be both financial (e.g. changes in counterparty creditworthiness, market price fluctuations) and non-financial in nature (e.g. conduct, inadequate control processes, system failures). Such risks could potentially result in the Bank's inability to cover losses due to insufficient capitalisation or to refinance itself due to insufficient liquidity.

DB Group is committed to aligning risks and rewards. Every employee, whether in a business or infrastructure role, can have an impact on the Bank's processes and controls, which could ultimately generate losses or reputational damage for the Bank. In addition, certain roles are involved in financial transactions, which could generate additional risks and potential losses.

In line with the Values set out in the Code of Conduct, every employee is therefore expected to be aware of the risks which could result from their actions or decisions and to manage these appropriately within the DB Group's risk appetite. This includes considering different viewpoints when making decisions, including taking into account worst case scenarios, and identifying the associated risks and how these risks could be mitigated and controlled. It also includes proactively communicating these risks to the appropriate stakeholders. The Bank offers a number of mandatory and optional training courses to help employees adhere to the Code of Conduct and manage risk.

Risk management standards

DB Group follows an integrated risk management approach, which defines risk management accountabilities and responsibilities across the organisation. This ensures group-wide consistency in risk management standards, while allowing for adaptation to local or legal entity specific regulatory requirements.

The following outlines the standards by which DB Group manages its risks:

Organisational standards

- Clear committee structures provide oversight and escalation points for the identification, monitoring and mitigation of material risks, and ensure adequate financial resources are in place.
- All risk types are assigned to a 2nd LoD risk type controller responsible for setting a framework that includes roles and responsibilities (e.g. relevant approval authorities), to which the 1st LoD, as risk owners, must adhere.
- Subsidiaries have appropriate oversight bodies to manage the risks taken, with dedicated Chief Risk Officer ("CRO") established.

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3 Risk Management (continued)

3.1 Risk and Capital Management (continued)

Risk management standards (continued)

Functional standards

- All material risks and key controls are routinely identified and assessed.
- Risk is taken and monitored within a defined risk appetite across all dimensions of DB Group's activities, with appropriate consequences applied where appetite is breached.
- Risk is actively managed to balance risk and reward and stay within risk appetite, including via appropriate risk mitigation.
- Stress testing is routinely applied to ensure DB Group has adequate financial resources and can define, ex-ante, mitigating actions.
- Risk is measured and reported to enable informed decision-making.
- Appropriate governance, escalation and countermeasures are in place to address a capital and / or liquidity stress, including if DB Group enters resolution.

The standards, in combination with the DB Group's Values, make up the DB Group's expectations for a culture where every employee is expected to act like a risk manager. In alignment with the Code of Conduct, the Risk division therefore sets the risk culture expectations for DB Group; however, divisions and functions across the Bank are responsible for embedding the DB Group's risk culture expectations

Risk and Capital Management Organisation

The Management Board ("MB") has joint and several responsibility for DB Group's risk profile. It is responsible for defining and implementing comprehensive and aligned business and risk strategies, as well as ensuring well-defined risk management functions and operating processes are in place to ensure that DB Group's overall performance is aligned to its business and risk strategy. The CRO heads up the Risk function and is a member of the MB. Without prejudice to the ultimate authority and final decision-making power of the MB, the CRO has DB Group-wide, supra-divisional responsibility for the management of all credit, market, liquidity and operational risks. Individual MB members are assigned as having ultimate accountability for the risk types covered in their organisation. The MB is responsible for approving this policy.

The Group Risk Committee ("GRC"), established by the MB, is the central forum for review and decision of several risk and capital related matters. The GRC is chaired by the CRO and is responsible for reviewing and endorsing this policy ahead of MB approval.

The following sub-committees of the GRC are established:

- Enterprise Risk Committee: Focuses on financial risks (including definition and review of stress tests), enterprise-wide risk trends, events and cross-risk portfolios, bringing together risk experts from various risk disciplines.
- Non-Financial Risk Committee: Oversees, governs and coordinates the management of nonfinancial risks in DB Group and establishes a cross-risk and holistic perspective of the key nonfinancial risks of DB Group.
- Group Reputational Risk Committee: Oversees, governs and coordinates the management of reputational risk and provides for an appropriate look-back and a lessons learnt process.
- Product Governance Committee: Oversees and coordinates Product Governance across the organisation

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3 Risk Management (continued)

3.1 Risk and Capital Management (continued)

Risk and Capital Management Organisation (continued)

Dedicated Risk units are established with the mandate to:

- Ensure that the business conducted within each division is consistent with the DB Group's risk appetite;
- Formulate and implement risk and capital management policies, procedures and methodologies that are appropriate to the businesses within each division;
- Approve credit, market and liquidity risk limits;
- Conduct periodic portfolio reviews to ensure that the portfolio of risks is within acceptable parameters; and
- Develop and implement risk and capital management infrastructures and systems that are appropriate for each division.

The heads of the DB Group's Risk units, who are the members of DB's GRC, are responsible for the performance of the units and report directly to DB Group's CRO.

DB Group's Finance and Group Audit departments support the Risk function where they operate independently of both the group divisions and of the Risk function.

3.2 Risk Appetite Framework

The Group's risk appetite is set at least annually in the Group Risk Appetite Statement ("RAS"), signed off by the MB. Through qualitative statements and quantitative metrics, the DB Group RAS states the aggregate level of risk that DB Group is able and willing to assume in pursuit of its strategic objectives. The strategic plan is tested against risk appetite for resilience under stress during the annual planning cycle.

Risk appetite applies across all divisions and material risk-taking business units of DB Group globally, is communicated to the appropriate level of granularity and is monitored on both an actual and stress basis (where appropriate). To drive adherence, breaches against risk appetite are linked to potential consequences at DB Group, divisional, sub-divisional and / or individual level.

Risk capacity is defined as the maximum level of risk the Bank can assume before breaching regulatory capital requirements and liquidity needs and our obligations to stakeholders.

Risk appetite is an integral element in the business planning processes via Business and Risk Strategy, to promote the appropriate alignment of risk, capital and performance targets, while at the same time considering risk capacity and appetite constraints from both financial and non-financial risks. The Bank leverages the stress testing process to test the compliance of the plan also under stressed market conditions. Top-down risk appetite serves as the limit for risk-taking for the bottom-up planning from the business functions.

3 Risk Management (continued)

3.2 Risk Appetite Framework (continued)

The RAS at the Bank ensures that risk taking activities at the Bank are consistent with DB Group's strategy, business and risk overviews, as well as the local regulatory environment. Key objectives of the RAS are as follows:

Strategic objectives: The articulation of risk appetite should be linked to the strategy and material risks of DB Group, legal entity (subsidiaries and branches) or business unit.

Qualitative statements: Clearly articulated statements should set the overall tone for the Bank's approach to risk taking, including the motivations for taking on or avoiding certain types of risks, products, country / regional exposures, or other categories.

Top-down allocation and calibration: The framework should define 'top-down' risk appetite relative to risk capacity across earnings, capital adequacy and liquidity which is allocated to risk types to support calibration of limits & thresholds.

Quantitative risk appetite metrics: Key risk limits and thresholds should be cascaded and 'bottom-up' calibrations aligned to achieve the following allocated risk appetite outcomes.

- Be able to anticipate emerging risks and be adaptive towards changing economic and regulatory developments;
- Provide the basis for ongoing monitoring of the risk profile through the Bank's 'Risk and Capital Profile' report.

In facilitating a consistent understanding of the nomenclatures around risk appetite, all key definitions established at DB Group level are adapted to the Bank as below:

Risk Appetite Framework: The overall approach through which risk appetite is established, communicated, monitored and controlled. It includes risk appetite statements together with risk appetite related policies, methodologies, processes, and controls;

Risk Capacity: Risk capacity reflects the maximum level of risk it is able to assume given its current resources before breaching the prevailing regulatory capital and economic capital and liquidity requirements and expectations of key stakeholders;

Risk Appetite: The level of risk that the Bank is willing to assume to achieve its strategic objectives;

Limit: Quantitative restriction on the size of risk. A limit breach requires that actions must be taken to bring risk back within limit in a timely manner and that appropriate consequences will be considered. A limit can usually be linked to a specific business or 1st LoD risk owner;

Risk Profile: Point in time assessment of the Bank's risk exposures aggregated at DB Group level or expressed across risk type, businesses and legal entities

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3 Risk Management (continued)

3.2 Risk Appetite Framework (continued)

The Bank's Risk Appetite articulates the overall tone from the top in pursuing risk across the Bank and supports DB Group's risk culture, in reinforcing the Bank's holistic risk management practices. In conjunction to the qualitative statements, the Bank desires to:

- Set the overall tone for the entity's approach to risk taking, including the motivations for taking on or avoiding certain types of risk, products, country / regional exposures, or other factors.
- Effectively establish the Bank's approach to the management of risk appetite, consistent with regulatory requirements.
- Qualitative statements must:
 - Set the tone for the Bank's risk management objectives with respect to earnings stability, capital adequacy and liquidity;
 - Establish qualitative boundaries within which the Bank is prepared to operate from a risk perspective
 - Be linked to day-to-day operating processes and controls;
 - Be supported via appropriate linked metrics (where deemed appropriate);
 - Be reviewed at least annually.
- These statements must be underpinned by a set of quantitative measures (with associated limits or thresholds) and risk assessments that are subject to timely monitoring, with corresponding escalation and consequence for breaches.
- Risk is taken within a defined risk appetite, which is actively managed and monitored in a timely manner, in order to maintain a robust risk profile and capital adequacy.
- Maintain stable funding and strategic liquidity to ensure that business is conducted within the liquidity risk appetite.
- Avoid any undue concentrations within the portfolios considering multiple dimensions, e.g. counterparty, region / country, industries, products / asset classes and business lines.
- Promote balanced risk adjusted performance and be fully responsible for accepting well compensated risks within risk appetite.
- Ensure that business activity is supported by appropriate processes and controls to minimise operational risk.
- Minimise negative reputational, environmental and social impacts of our business activities.

The Bank assigns key risk appetite metrics that are sensitive to the material risks to which the Bank is exposed to and which are able to function as key indicators of the Bank's financial health in terms of liquidity and capital requirements. These key metrics are Common Equity Tier 1 ("CET1") ratio, Economic Capital Adequacy ("ECA") ratio, Liquidity Coverage Ratio ("LCR"), Stressed Net Liquidity Position ("SNLP").

3 Risk Management (continued)

3.2 Risk Appetite Framework (continued)

In order to determine risk appetite and capacity, thresholds are set and the escalation mechanism are defined for further action. The levels chosen reflect the Bank's strategic focus and business plan as well as additional internal and external stakeholders. Monitoring of risk profile using key risk appetite metrics is implemented using framework as described below:

Green status (within risk appetite): Performances are in line with the Bank's preparedness to accept risk to achieve its business objectives and risk management is considered to be operating in a normal environment. As part of normal risk management, measures are actively taken to ensure that the risk profile remains within the risk appetite, and move towards the externally disclosed strategic target as in the Risk and Capital Demand plan.

Amber status (within risk capacity): Issues that may pose threats to the Bank's business model, deviate from the desired risk appetite and undermine the stakeholder expectations. Heightened risk management or mitigating actions may be applied in reference to the escalation matrix, in ensuring timely intervention.

Red status: Once the risk capacity is crossed, mitigating actions are invoked if not already triggered in the amber range.

In the event that the desired risk appetite is breached under either normal or stress scenarios, an escalation is made to MANCO which has to review and decide if further escalations to the DB Group and / or mitigating actions are required to bring risk profile back to the desired risk appetite range.

The risk appetite framework is approved by the local Management Board. Amendments to the risk appetite framework at the Bank must be approved by the local Management Board.

3.3 Risk Management Tools

DB Group uses a comprehensive range of quantitative methodologies for assessing and managing risks. As a matter of policy, DB Group continually assesses the appropriateness and the reliability of its quantitative tools and metrics in light of the DB Group's changing risk environment. Some of these tools are common to a number of risk categories, while others are tailored to the particular features of specific risk categories. The advanced internal tools and metrics the DB Group currently uses to measure, manage and report its risk are:

3 Risk Management (continued)

3.3 Risk Management Tools (continued)

3.3.1 Economic Capital

Economic capital measures the amount of capital DB Group needs to absorb from very severe unexpected losses arising from the DB Group's exposures. "Very severe" in this context means that economic capital is set at a level to cover with a probability of 99.98% the aggregated unexpected losses within one year. DB Group calculates economic capital for the default risk, transfer risk and settlement risk elements of credit risk, for market risk, for operational risk and for general business risk. DB Group continuously reviews and enhances its economic capital model as appropriate. It uses economic capital to show an aggregated view of its risk position from individual business lines up to its consolidated group level. In addition, DB Group considers economic capital, in particular for credit risk, when the DB Group measures the risk-adjusted profitability of its client relationships.

3.3.2 Expected Loss

The DB Group uses expected loss as a measure of the credit and operational risk. Expected loss is a measurement of the loss the DB Group can expect within a one-year period from these risks as of the respective reporting date, based on historical loss experience. When calculating expected loss for credit risk, DB Group takes into account credit risk ratings, collateral, maturities and statistical averaging procedures to reflect the risk characteristics of different types of exposures and facilities. All parameter assumptions are based on statistical averages of up to seven years based on DB Group's internal default and loss history as well as external benchmarks. DB Group uses expected loss as a tool of the risk management process and as part of DB Group's management reporting systems. DB Group also considers the applicable results of the expected loss calculations as a component of its collectively assessed allowance for credit losses included in its financial statements. For operational risk DB Group determines the expected loss from statistical averages of internal loss history, recent risk trends as well as forward looking expert estimates.

3.3.3 Value at Risk

The DB Group uses the value-at-risk approach to derive quantitative measures for trading book market risks under normal market conditions. DB Group's value-at-risk figures play a role in both internal and external (regulatory) reporting. For a given portfolio, value-at-risk measures the potential future loss (in terms of market value) that, under normal market conditions, will not be exceeded with a defined confidence level in a defined period. The value-at-risk for a total portfolio represents a measure of diversified market risk (aggregated using pre-determined correlations) in that portfolio.

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3 Risk Management (continued)

3.3 Risk Management Tools (continued)

3.3.4 Stress Testing

The Bank performs the stress test on pillar 1 capital as required and specified by BNM.

The Bank's Stress Tests are reported in the Risk and Capital Profile ("RCP") report as well as in the separate semiannual stress test submissions to BNM and regularly discussed by the MANCO and ALCO. The MANCO ensures that stress testing framework and scenarios used reflect all relevant material risks as well as local regulatory requirements. The local Management Board approves such stress testing framework, and is informed about the stress testing results regularly. It also assesses the viability of the Bank's capital planning based on the stress test results.

The MANCO is responsible to initiate and properly document remedial measures and mitigating actions (including explanations that justify the credibility and feasibility of those actions) based on the stress test results under consideration of the risk appetite, if deemed appropriate or necessary.

The Bank subjects all risk types covered under its Economic Capital ("EC") concept (Pillar 2 risks), as well as liquidity risk, to regular stress tests. At DB Group level, the Stress Testing Committee is responsible for aligning scenario definitions between DB Group and legal entities according to the Global Stress Testing Policy.

Credit risk stress testing

Credit risk stress tests of economic capital and also local regulatory capital demand are based on Group Credit Risk Stress Test ("GCST") methodology (Global Downturn or another macroeconomic stress scenario). The results are provided on a quarterly basis.

The Bank applies several rating migration matrices (based on Global Downturn scenario and macroeconomic stress scenarios), depending on the type of borrower, as provided by DB Group to stress test its Credit Risk Weighted Asset ("RWA"). The rating migration matrices are an output from the GCST which is the macroeconomic downturn applied on the Bank's credit portfolio using the internal EC model to calculate rating downgrade impact. By applying regulatory risk weights to the exposure of the derived portfolio, stressed RWA are calculated.

3 Risk Management (continued)

3.3 Risk Management Tools (continued)

3.3.4 Stress Testing (continued)

Liquidity risk stress testing

The Bank is fully integrated into DB Group's liquidity risk management framework, and as such performs local liquidity stress tests on a regular basis. The local stress test framework is derived from DB Group's global stress testing framework. Local stress test results are computed based on the standards described in the Group Liquidity Stress Testing Methodology. Stress parameters are adjusted to cover local market and product specifications and are discussed at the relevant governance forum. The parameters are locally verified and documented by the business areas, and subject to the model validation process carried out by an independent risk function, i.e. Liquidity Risk Management ("LRM"). Liquidity Stress Test results are measured against the pre-defined risk thresholds and monitored by LRM on a daily basis, discussed regularly in the local ALCO, and brought to the attention of the MANCO and the local Management Board.

Market risk stress testing

Stress testing is a key market risk management technique, which evaluates the potential effects of extreme market events and movements on individual risk factors. It is one of the core quantitative tools used to assess the market risk of the Bank's positions. Stress testing is complementary to statistical model approaches such as Value at Risk ("VaR"). Market & Valuation Risk Management ("MVRM") performs several types of stress tests to capture a variety of risks: individual business-level stress tests, MVRM portfolio stress testing (e.g. Portfolio Stress Testing ("PST"), Event Risk Scenario ("ERS"), and Group-wide stress testing.

Operational risk stress testing

The Bank is fully integrated into the Group's Operational Risk Management Framework ("ORMF"), and as such performs operational risk stress tests on a regular basis. The operational risk stress test framework is derived from DB's global stress testing framework, but adjusted to cover local market peculiarities.

Group Non-Financial Risk translates the Group operational risk stress impact into the Bank operational risk factors for EC and Regulatory Capital ("RC") respectively. The stressed operational risk factors for EC and RC are calculated at least on a quarterly basis by stressed loss projections and their impact to EC / RC metrics. This approach translates defined stress scenarios into stress impact on legal entity level.

3 Risk Management (continued)

3.4 Risk Reporting and Measurement Systems

The DB Group has centralised risk data warehouses and systems supporting regulatory reporting and external disclosures, as well as internal management reporting for credit, market, operational and liquidity risk. The DB Group's risk infrastructure incorporates the relevant legal entities and business divisions and provides the basis for tailor-made reporting on risk positions, capital adequacy and limit utilisation to the relevant functions on a regular and ad-hoc basis. Established units within DB Group Finance and Risk assume responsibility for measurement, analysis and reporting of risk while ensuring sufficient quality and integrity of risk related data.

The main reports on risk and capital management that are used to provide the central governance bodies with information relating to DB Group risk exposures are the following:

- DB Group's RCP which is presented quarterly to the DB Group Management Board. It comprises an overview of the current risk, capital and liquidity situation of the DB Group incorporating information on regulatory capital and economic capital adequacy.
- Stress tests are performed quarterly and reported to the DB Group Management Board. These are supplemented, as required, by ad-hoc stress tests.

3.5 Capital Management

The Bank's capital management is fully integrated with DB Group's capital management. The DB Group's Treasury function manages the DB Group's capital at group level and locally in each region. Treasury implements the DB Group's capital strategy, which itself is developed by the DB Group Capital and Risk Committee and approved by the DB Group Management Board. DB Group is committed to maintain its sound capitalisation. Overall capital demand and supply are constantly monitored and adjusted, if necessary, to meet the need for capital from various perspectives. The Bank's strategic plan, announced on 29 October 2015, includes key financial targets and their glide path until 2020.

The allocation of capital, determination of the DB Group's funding plan and other resource issues are presented to and approved by the DB Group Capital and Risk Committee.

The DB Group conducts an annual planning process to determine the DB Group's future strategic direction, decide on key initiatives and allocate resources to the businesses. The DB Group's plan comprises profit and loss, capital supply and capital demand, other resources, such as headcount, and business-specific key performance indicators. Based upon a range of economic scenarios, the business areas discuss their strategic development with the required risk management functions in order to align their revenue potential with DB Group's risk appetite / resources. The approved planned risk-weighted assets and capital deduction items form the basis for quarterly capital demand limits by business area. The risk and performance plans feed into DB Group's Treasury capital and liquidity planning. Depending on the development of risk-weighted assets and capital deduction items, DB Group's Treasury regularly updates contingency measures in light of DB Group's Tier 1 capital ratio target.

3 Risk Management (continued)

3.5 Capital Management (continued)

Regional capital plans covering the capital needs of the DB Group's branches and subsidiaries are prepared on an annual basis and presented to the DB Group Investment Committee. Local ALCO attend to the needs of legal and regulatory capital requirements under the stewardship of regional Treasury teams. Furthermore, ALCO safeguard compliance with requirements such as restrictions on dividends allocable for remittance to DB Group or on the ability of DB Group's subsidiaries to make loans or advances to the parent bank. In developing, implementing and testing the DB Group's capital and liquidity, the DB Group takes such legal and regulatory requirements into account.

4 Credit Risk

Credit risk arises from all transactions where actual, contingent or potential claims against any counterparty, borrower or obligor (which refer to collectively as "counterparties") exist, including those claims that the Bank plans to distribute.

Credit Risk contains five material categories (Level 2) in DB Group's Risk Taxonomy:

- **Default / Migration Risk** is the risk that a counterparty defaults on its payment obligations or experiences material credit quality deterioration increasing the likelihood of a default.
- **Country Risk** is the risk that otherwise solvent and willing counterparties are unable to meet their obligations due to direct sovereign intervention or policies. Country Risk shall mean the risk that the Bank may suffer a loss due to possible deterioration of economic conditions, political and social upheaval, nationalisation and expropriation of assets, government repudiation of external indebtedness, exchange controls or currency depreciation or devaluation in any given country.
- **Transactional / Settlement Risk (Exposure Risk)** is the risk that arises from any existing contingent or potential future positive exposure.
- **Mitigation Risk** is the risk of higher losses due to risk mitigation measures not performing as anticipated.
- **Concentration Risk** is the risk of an adverse development in a specific single counterparty, country, industry or product leading to a disproportionate deterioration in the risk profile of DB Group's credit exposures to that counterparty, country, industry or product.

The Bank manages credit risk on the basis of policies and guidelines set by Group Credit Risk Management ("CRM"), an independent risk management function organised in alignment with the divisions of the Bank.

4 Credit Risk (continued)

The Bank's CRM is based on the following principles:

- Credit risk is only accepted for adopted clients, after proper due diligence involving the business as 1st LoD, for explicitly approved businesses, products and locations, if a rating has been assigned in line with agreed and approved processes, and if plans for an orderly termination of the risk positions have been considered.
- Collateral or other risk mitigating instruments which can be an alternative source of repayment do not substitute for high quality underwriting standards and a thorough assessment of the debt service ability of the counterparty has to be performed during the credit process.
- DB Group has a conservative approach to outright cash risk and longer tenor exposures and strives to adequately secure, guarantee and / or hedge this risk. Exceptions are lower risk short-term transactions and facilities supporting specific trade finance requests as well as low risk businesses where the margin allows for adequate loss coverage.
- New business initiatives, products and changes to existing products have to be assessed within DB Group's New Product Approval ("NPA") framework.
- CRM maintains a comprehensive framework of Policies and Procedures that implement these Principles by providing additional specifications and guidance and by describing the various processes in detail. All documents have an owner, are regularly, at least annually, reviewed and are available from the DB Policy Portal

In this context, DB Group's aims

- to avoid large directional credit risk on a counterparty and portfolio level by applying stringent underwriting standards combined with an active hedging and distribution model and collateralisation of the hold portfolio where feasible.
- to secure the derivative portfolio through adequate collateral agreements and may additionally hedge concentration risks to further mitigate credit risks from underlying market movements.
- to ensure a diversified and marketable credit portfolio to prevent undue concentrations and to minimise earnings volatility and long-tail risks, effectively protecting the Bank's capital in all market conditions.

CRM is organised globally and carries out risk identification, assessment, management, monitoring and reporting of credit risks. The CRM department is independent from business. Accordingly, the Bank adopts the credit policies of DB Group and the Head of Risk is responsible for ensuring that local procedures are compliant with DB Group principles.

4.1 Credit Risk Measurement

To determine the risk weighted assets for regulatory capital requirement purposes, the Bank measures credit risk using the standardised approach in line with BNM regulations. 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. In order to calculate the regulatory capital requirements under the standardised approach, the Bank use eligible external ratings from Standard & Poor's, Moody's, Fitch Ratings.

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4 Credit Risk (continued)

4.1 Credit Risk Measurement (continued)

For Pillar 2 capital, the Bank adopts the credit risk economic capital concept from DB Group which measures the amount of capital needed to absorb very severe, unexpected losses arising from exposures over the period of one year. Further information on the DB Group credit risk EC quantification can be found in the DB Group's annual Pillar 3 report under section "Credit Risk Economic Capital Model".

4.2 Impairment of Financial Assets

MFRS 9 replaces the 'incurred loss' model in MFRS 139 with an 'expected credit loss' model. The new impairment model applies to all debt instruments that are measured at amortised cost or fair value through other comprehensive income, and to off-balance sheet credit exposures such as loan commitments and financial guarantees (hereafter collectively referred to as "Financial Assets").

Under MFRS 9, when determining whether the credit risk (i.e., risk of default) of a Financial Asset has increased significantly since initial recognition, the Bank considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes quantitative and qualitative information based on historical experience, credit risk assessment and forward-looking information (including macro-economic factors). The assessment of significant credit deterioration is key in determining when to move from measuring an allowance based on 12-month expected credit losses ("ECL") to one that is based on lifetime ECLs.

MFRS 9 introduces a three stage approach to impairment for Financial Assets at the date of origination or purchase. This approach is summarised as follows:

- Stage 1: The Bank recognises a loss allowance at an amount equal to 12-month ECL. This represents the portion of lifetime ECL from default events that are expected within 12 months of the reporting date, assuming that credit risk has not increased significantly after initial recognition.
- Stage 2: The Bank recognises a loss allowance at an amount equal to lifetime ECL for those Financial Assets which are considered to have experienced a significant increase in credit risk since initial recognition. This requires the computation of ECL based on lifetime probability of default ("LTPD") that represents the probability of default occurring over the remaining lifetime of the Financial Asset. Allowance for credit losses are higher in this stage because of an increase in credit risk and the impact of a longer time horizon being considered compared to 12 months in Stage 1.
- Stage 3: The Bank recognises a loss allowance at an amount equal to lifetime ECL, reflecting a Probability of Default ("PD") of 100 %, via the recoverable cash flows for the asset, for those Financial Assets that are credit-impaired. The Bank's definition of default is aligned with the regulatory definition. The treatment of loans in Stage 3 remains substantially the same as the treatment of impaired loans under MFRS 139.

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4 Credit Risk (continued)

4.3 Credit-impaired Financial Assets

The determination of whether a Financial Asset is credit impaired focusses exclusively on default risk, without taking into consideration the effects of credit risk mitigants such as collateral or guarantees. Specifically, a Financial Asset is credit impaired and in Stage 3 when:

- The Bank considers the obligor is unlikely to pay its credit obligations to the Bank. Determination may include forbearance actions, where a concession has been granted to the borrower or economic or legal reasons that are qualitative indicators of credit impairment; or
- Contractual payments of either principal or interest by the obligor are past due by more than 90 days.

For Financial Assets considered to be credit impaired, the ECL allowance covers the amount of loss the Bank is expected to suffer. Forecasts of future economic conditions when calculating ECLs are considered. The lifetime expected losses are estimated based on the probability-weighted present value of the difference between 1) the contractual cash flows that are due to the Bank under the contract; and 2) the cash flows that the Bank expects to receive.

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4 Credit Risk (continued)

4.4 Geographic distribution of credit exposures, broken down in significant areas by major types of gross credit exposures

Table 7

Credit Exposure Category	Geography						31-Dec-22
	America RM'000	Europe RM'000	India RM'000	Malaysia RM'000	Singapore RM'000	Others RM'000	Total RM'000
Sovereigns/Central Banks	-	-	-	3,708,439	-	-	3,708,439
Banks, DFIs & MDBs	57,635	470,354	35,783	1,279,550	130,148	67,975	2,041,445
Public Sector Entities	-	-	-	-	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	59,128	-	-	59,128
Corporates	-	10,199	-	3,278,883	33,855	-	3,322,937
Regulatory Retails	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	2,279	-	-	2,279
Other Asset	-	-	-	888,942	-	-	888,942
Equity Exposure	-	-	-	13,033	-	-	13,033
Defaulted Exposures	-	-	-	1,039	-	-	1,039
Grand Total	57,635	480,553	35,783	9,231,293	164,003	67,975	10,037,242

Table 7.1

Credit Exposure Category	Geography						31-Dec-21
	America RM'000	Europe RM'000	India RM'000	Malaysia RM'000	Singapore RM'000	Others RM'000	Total RM'000
Sovereigns/Central Banks	-	-	-	5,018,786	-	-	5,018,786
Banks, DFIs & MDBs	37,898	359,348	59,389	1,164,058	62,022	97,223	1,779,938
Public Sector Entities	-	-	-	-	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	63,996	-	-	63,996
Corporates	-	12,041	-	3,200,823	55,478	-	3,268,342
Regulatory Retails	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	2,795	-	-	2,795
Other Asset	-	-	-	751,038	-	-	751,038
Equity Exposure	-	-	-	15,816	-	-	15,816
Defaulted Exposures	-	-	-	1,416	-	-	1,416
Grand Total	37,898	371,389	59,389	10,218,728	117,500	97,223	10,902,127

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4 Credit Risk (continued)

4.5 Distribution of exposures by sector, broken down by major types of gross credit exposures

Table 8

Credit Exposure	Sector											31-Dec-22
Category	Construction	Education, Health & Others	Electricity, Gas & Water Supply	Finance, Insurance, Real Estate & Business Activities	Household	Manufacturing	Mining & Quarrying	Others	Primary Agriculture	Transport, Storage & Communication	Wholesale & Retail Trade & Restaurants & Hotels	Total
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereigns/Central Banks	-	-	-	3,708,439	-	-	-	-	-	-	-	3,708,439
Public Sector Entities	-	-	-	-	-	-	-	-	-	-	-	-
Banks, DFIs & MDBs	-	-	-	2,041,445	-	-	-	-	-	-	-	2,041,445
Insurance Companies, Securities Firms and Fund Managers	-	-	-	58,756	-	-	-	372	-	-	-	59,128
Corporates	208,772	-	21,746	83,491	-	1,363,765	7,863	252,467	514	644,594	739,725	3,322,937
Regulatory Retail	-	-	-	-	-	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	-	2,279	-	-	-	-	-	-	2,279
Other Assets	-	-	-	888,942	-	-	-	-	-	-	-	888,942
Equity Exposure	-	-	-	13,033	-	-	-	-	-	-	-	13,033
Defaulted Exposures	-	-	-	-	1,039	-	-	-	-	-	-	1,039
Grand Total	208,772	-	21,746	6,794,106	3,318	1,363,765	7,863	252,839	514	644,594	739,725	10,037,242

Table 8.1

Credit Exposure	Sector											31-Dec-21
Category	Construction	Education, Health & Others	Electricity, Gas & Water Supply	Finance, Insurance, Real Estate & Business Activities	Household	Manufacturing	Mining & Quarrying	Others	Primary Agriculture	Transport, Storage & Communication	Wholesale & Retail Trade & Restaurants & Hotels	Total
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Sovereigns/Central Banks	-	-	-	5,018,786	-	-	-	-	-	-	-	5,018,786
Public Sector Entities	-	-	-	-	-	-	-	-	-	-	-	-
Banks, DFIs & MDBs	-	-	-	1,779,938	-	-	-	-	-	-	-	1,779,938
Insurance Companies, Securities Firms and Fund Managers	-	-	-	63,996	-	-	-	-	-	-	-	63,996
Corporates	190,648	-	20,578	336,667	6	1,347,138	6,669	343,019	589	442,446	580,582	3,268,342
Regulatory Retail	-	-	-	-	-	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	-	2,795	-	-	-	-	-	-	2,795
Other Assets	-	-	-	751,038	-	-	-	-	-	-	-	751,038
Equity Exposure	-	-	-	15,816	-	-	-	-	-	-	-	15,816
Defaulted Exposures	-	-	-	-	1,416	-	-	-	-	-	-	1,416
Grand Total	190,648	-	20,578	7,966,241	4,217	1,347,138	6,669	343,019	589	442,446	580,582	10,902,127

4 Credit Risk (continued)

4.6 Residual contractual maturity breakdown by major types of gross credit exposures

Table 9

Credit Exposure	Maturity			31-Dec-22
	Up to 1year RM'000	1-5 year RM'000	> 5 years RM'000	Total RM'000
Sovereigns/Central Banks	3,708,439	-	-	3,708,439
Public Sector Entities	-	-	-	-
Banks, DFIs & MDBs	969,376	891,425	180,644	2,041,445
Insurance Cos, Securities Firms & Fund Managers	52,773	6,349	-	59,122
Corporates	2,569,552	753,391	-	3,322,943
Regulatory Retail	-	-	-	-
Residential Mortgages	111	1,249	919	2,279
Other Assets	888,942	-	-	888,942
Equity Exposure	13,033	-	-	13,033
Defaulted Exposures	257	436	346	1,039
Grand Total	8,202,483	1,652,850	181,909	10,037,242

Table 9.1

Credit Exposure	Maturity			31-Dec-21
	Up to 1year RM'000	1-5 year RM'000	> 5 years RM'000	Total RM'000
Sovereigns/Central Banks	5,018,786	-	-	5,018,786
Public Sector Entities	-	-	-	-
Banks, DFIs & MDBs	878,764	759,961	141,213	1,779,938
Insurance Cos, Securities Firms & Fund Managers	62,643	-	1,353	63,996
Corporates	2,620,254	648,088	-	3,268,342
Regulatory Retail	-	-	-	-
Residential Mortgages	35	1,043	1,717	2,795
Other Assets	751,038	-	-	751,038
Equity Exposure	15,816	-	-	15,816
Defaulted Exposures	164	562	690	1,416
Grand Total	9,347,500	1,409,654	144,973	10,902,127

4.7 Credit-impaired Loans

Table 10: Stage 3 Lifetime ECL credit-impaired loans, advances and financing analysed by economic purpose which are wholly incurred in Malaysia are as follows:

	Group and Bank	
	2022 RM'000	2021 RM'000
Household (Malaysia)	<u>2,519</u>	<u>3,258</u>

4 Credit Risk (continued)

4.8 Reconciliation of Loan Impairment Provisions

Table 11: Movements in loss allowance which reflect the Expected Credit Loss (“ECL”) model on impairment are as follows:

Group and Bank	2022				2021			
	12-month ECL	Lifetime ECL not credit-impaired	Lifetime ECL credit-impaired	Total	12-month ECL	Lifetime ECL not credit-impaired	Lifetime ECL credit-impaired	Total
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
Loans, advances and financing at amortised cost*								
Balance at 1 January	2,573	1,026	1,886	5,485	3,224	3,101	1,758	8,083
Transfer to 12-month ECL	311	(33)	(278)	-	75	-	(75)	-
Transfer to lifetime ECL not credit-impaired	-	-	-	-	-	-	-	-
Transfer to lifetime ECL credit-impaired	(97)	-	97	-	(405)	-	405	-
Net remeasurement of loss allowance	20	(484)	(184)	(648)	(350)	(1,135)	(202)	(1,687)
New financial assets originated or purchased	823	80	-	903	932	478	-	1,410
Financial assets that have been derecognized	(1,180)	(479)	-	(1,659)	(903)	(1,418)	-	(2,321)
Balance at 31 December	2,450	110	1,521	4,081	2,573	1,026	1,886	5,485

* The loss allowance in this table includes ECL on loan commitment and financial guarantees of RM2,173,000 (2021: RM2,287,000).

4 Credit Risk (continued)

4.9 Standardised Approach to Credit Risk

Under the standardised approach for credit risk, the determination of capital requirements is based on an approach that links predefined risk weights by BNM to predefined asset class to which the credit exposure is assigned across sovereigns, central banks, public sector entities, banks, corporates, residential mortgages, regulatory retail portfolios, non-performing loans, high risk exposures and other assets. These credit exposures are risk-weighted based on recognised external credit ratings.

For Sovereigns, Corporates and Banking Institutions, external ratings are used to assign risk weights. These external ratings must come from BNM approved rating agencies, known as External Credit Assessment Institutions (“ECAI”); namely

- (a) Standard & Poor’s (“S&P”)
- (b) Moody’s Investors Services (“Moody’s”)
- (c) Rating Agency Malaysia Berhad (“RAM”)
- (d) Malaysian Rating Corporation Berhad (“MARC”)

The Bank uses ratings from these agencies as part of its day to day business. External ratings for the counterparty are determined as soon as a relationship is established and these ratings are tracked and kept updated. Assessments provided by approved ECAI are mapped to credit quality steps as prescribed by BNM. Where a counterparty or exposure is rated by more than one ECAI, the second highest rating is used to determine the risk weight.

The following is a summary of the rules governing the assignment of risk weights under the Standardised Approach. Each exposure must be assigned to one of the five credit quality rating categories defined in the table below. For counterparty exposure class of Banking Institutions, those with original maturity of below three months and denominated in RM are all risk-weighted at 20% regardless of credit rating.

Sovereigns and Central Banks

Rating Category	Standard & Poor’s Rating Services (S&P)	Moody’s Investors Service (Moody’s)	Risk weight
1	AAA to AA-	Aaa to Aa3	0%
2	A+ to A-	A1 to A3	20%
3	BBB+ to BBB-	Baa1 to Baa3	50%
4	BB+ to B-	Ba1 to B3	100%
5	CCC+ to D	Caa1 to C	150%
Unrated			100%

Corporates

Rating Category	S&P	Moody’s	RAM	MARC	Risk weight
1	AAA to AA-	Aaa to Aa3	AAA to AA3	AAA to AA-	20%
2	A+ to A-	A1 to A3	A1 to A3	A+ to A-	50%
3	BBB+ to BB-	Baa1 to Ba3	BBB1 to BB3	BBB+ to BB-	100%
4	B+ to D	B1 to C	B1 to D	B+ to D	150%
Unrated					100%

4 Credit Risk (continued)

4.9 Standardised Approach to Credit Risk (continued)

Banking Institutions

Rating Category	S&P	Moody's	RAM Rating Services Berhad (RAM)	Malaysian Rating Corporation Berhad (MARC)	Risk weight	Risk weight (original maturity of 6 months or less)	Risk weight (original maturity of 3 months or less)
1	AAA to AA-	Aaa to Aa3	AAA to AA3	AAA to AA-	20%	20%	20%
2	A+ to A-	A1 to A3	A1 to A3	A+ to A-	50%	20%	
3	BBB+ to BBB-	Baa1 to Baa3	BBB1 to BBB3	BBB+ to BBB-	50%	20%	
4	BB+ to B-	Ba1 to B3	BB1 to B3	BB+ to B-	100%	50%	
5	CCC+ to D	Caa1 to C	C1 to D	C+ to D	150%	150%	
Unrated					50%	20%	

Table 12: Rated and Unrated Counterparties (2022)

CREDIT EXPOSURE (31-Dec-2022)	Ratings of Sovereigns and Central Banks by Approved ECAIs						
	Moody's S&P	Aaa to Aa3 AAA to AA-	A1 to A3 A+ to A-	Baa1 to Baa3 BBB+ to BBB-	B1 to B3 BB+ to B-	Caa1 to C CCC+ to D	Unrated Unrated
On and Off Balance-Sheet Exposures							
Sovereigns/Central Banks		-	3,708,439	-	-	-	-
Total	3,708,439	-	3,708,439	-	-	-	-

CREDIT EXPOSURE (31-Dec-2022)	Ratings of Banking Institutions by Approved ECAIs						
	Moody's S&P RAM MARC	Aaa to Aa3 AAA to AA- AAA to AA3 AAA to AA-	A1 to A3 A+ to A- A1 to A3 A+ to A-	Baa1 to Baa3 BBB+ to BBB- BBB1 to BBB3 BBB+ to BBB-	B1 to B3 BB+ to B- BB1 to B3 BB+ to B-	Caa1 to C CCC+ to D C1 to D C+ to D	Unrated Unrated Unrated Unrated
On and Off Balance-Sheet Exposures							
Banks, Development Financial Institutions & MDBs		383,916	1,387,817	14,951	25,660	-	229,101
Total	2,041,445	383,916	1,387,817	14,951	25,660	-	229,101

CREDIT EXPOSURE (31-Dec-2022)	Ratings Others by Approved ECAIs					
	Moody's S&P RAM MARC	Aaa to Aa3 AAA to AA- AAA to AA3 AAA to AA-	A1 to A3 A+ to A- A to A3 A+ to A-	Baa1 to Baa3 BBB+ to BB- BBB1 to BB3 BBB+ to BB-	B1 to C B+ to D B to D B+ to D	Unrated Unrated Unrated Unrated
On and Off Balance-Sheet Exposures Credit Exposures (using Corporate Risk Weights)						
Public Sector Entities		-	-	-	-	-
Insurance Cos, Securities Firms & Fund Managers		-	-	-	-	59,128
Corporates		-	23,313	6,451	-	3,293,173
Regulatory Retail		-	-	-	-	-
Residential Mortgages		-	-	-	-	2,279
Other Assets		-	1,230	-	-	887,712
Equity Exposure		12,770	-	-	-	263
Defaulted Exposure		-	-	-	-	1,039
Total	4,287,358	12,770	24,543	6,451	-	4,243,594

4 Credit Risk (continued)

4.9 Standardised Approach to Credit Risk (continued)

Table 12.1: Rated and Unrated Counterparties (2021)

CREDIT EXPOSURE (31-Dec-2021)	Ratings of Sovereigns and Central Banks by Approved ECAIs						
	Moody's S&P	Aaa to Aa3 AAA to AA-	A1 to A3 A+ to A-	Baa1 to Baa3 BB+ to BBB-	B1 to B3 BB+ to B-	Caa1 to C CCC+ to D	Unrated Unrated
On and Off Balance-Sheet Exposures							
Sovereigns/Central Banks		-	5,018,786	-	-	-	-
Total	5,018,786	-	5,018,786	-	-	-	-

CREDIT EXPOSURE (31-Dec-2021)	Ratings of Banking Institutions by Approved ECAIs						
	Moody's S&P RAM MARC	Aaa to Aa3 AAA to AA3 AAA to AA-	A1 to A3 A+ to A- A1 to A3 A+ to A-	Baa1 to Baa3 BB+ to BBB- BB1 to BBB3 BB+ to BBB-	B1 to B3 BB+ to B- BB1 to B3 BB+ to B-	Caa1 to C CCC+ to D C1 to D C+ to D	Unrated Unrated Unrated Unrated
On and Off Balance-Sheet Exposures							
Banks, Development Financial Institutions & MDBs		416,076	1,155,938	14,271	8,983	-	184,670
Total	1,779,938	416,076	1,155,938	14,271	8,983	-	184,670

CREDIT EXPOSURE (31-Dec-2021)	Ratings Others by Approved ECAIs					
	Moody's S&P RAM MARC	Aaa to Aa3 AAA to AA- AAA to AA3 AAA to AA-	A1 to A3 A+ to A- A to A3 A+ to A-	Baa1 to Baa3 BBB+ to BB- BBB1 to BB3 BBB+ to BB-	B1 to C B+ to D B to D B+ to D	Unrated Unrated Unrated Unrated
On and Off Balance-Sheet Exposures Credit Exposures (using Corporate Risk Weights)						
Public Sector Entities		-	-	-	-	-
Insurance Cos, Securities Firms & Fund Managers		-	-	-	-	63,996
Corporates		42,857	32,139	3,396	-	3,189,950
Regulatory Retail		-	-	-	-	-
Residential Mortgages		-	-	-	-	2,795
Other Assets		-	1,356	-	-	749,682
Equity Exposure		3,979	-	-	-	11,837
Defaulted Exposure		-	-	-	-	1,416
Total	4,103,403	46,836	33,495	3,396	-	4,019,676

The Bank has opted for the comprehensive approach for credit risk mitigation which takes into account the scaling factor when applying the standard haircut.

4 Credit Risk (continued)

4.9 Standardised Approach to Credit Risk (continued)

The following table shows the DBMB Group's exposure values in the standardised approach by risk weight. The information is shown after credit risk mitigation obtained in the form of eligible financial collateral, guarantees and credit derivatives.

Table 13 – Risk Weights under the Standardised Approach (2022)

31-Dec-2022

Risk Weights	Exposures after Netting & Credit Risk Mitigation												Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	Sovereigns and Central Banks	Public Sector Entities	Banks, DFIs and MDBs	Insurance Companies, Securities Firms and Fund Managers	Corporates	Regulatory Retail	Residential Mortgages	Higher Risk Assets	Other Assets	Specialised Financing / Investment	Securitisation	Equity Exposures		
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
0%	3,596,678	-	-	-	5,017	-	-	-	1,230	-	-	-	3,602,925	-
20%	-	-	418,680	-	-	-	-	-	-	-	-	-	418,680	83,736
35%	-	-	-	-	-	-	2,278	-	-	-	-	-	2,278	797
50%	-	-	976,089	-	28,436	-	-	-	-	-	-	-	1,004,525	502,263
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	36,027	59,122	3,284,368	-	1,036	-	887,711	-	-	13,013	4,281,277	4,281,278
1250%	-	-	-	-	-	-	-	-	-	-	-	20	20	250
Total Exposures	3,596,678	-	1,430,796	59,122	3,317,821	-	3,314	-	888,941	-	-	13,033	9,309,705	4,868,324
Risk-Weighted Assets by Exposures	-	-	607,807	59,122	3,298,586	-	1,833	-	887,712	-	-	13,263	4,868,323	-
Average Risk Weight	0.0%	0.0%	42.5%	100.0%	99.4%	0.0%	55.3%	0.0%	99.9%	0.0%	0.0%	101.8%	52.3%	-
Deduction from Capital Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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4 Credit Risk (continued)

4.9 Standardised Approach to Credit Risk (continued)

Table 13.1 – Risk Weights under the Standardised Approach (2021)

31-Dec-2021

Risk Weights	Exposures after Netting & Credit Risk Mitigation												Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	Sovereigns and Central Banks	Public Sector Entities	Banks, DFIs and MDBs	Insurance Companies, Securities Firms and Fund Managers	Corporates	Regulatory Retail	Residential Mortgages	Higher Risk Assets	Other Assets	Specialised Financing / Investment	Securitisation	Equity Exposures		
0%	RM'000 4,968,062	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 1,356	RM'000 -	RM'000 -	RM'000 -	RM'000 4,969,418	RM'000 -
20%	-	-	399,390	1,353	42,857	-	-	-	-	-	-	-	443,600	88,720
35%	-	-	-	-	-	-	2,795	-	-	-	-	-	2,795	978
50%	-	-	1,017,461	-	36,863	-	-	-	-	-	-	-	1,054,324	527,162
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	10,066	62,643	3,183,899	-	1,416	-	749,682	-	-	15,796	4,023,502	4,023,502
1250%	-	-	-	-	-	-	-	-	-	-	-	20	20	250
Total Exposures	4,968,062	-	1,426,917	63,996	3,263,619	-	4,211	-	751,038	-	-	15,816	10,493,659	4,640,612
Risk-Weighted Assets by Exposures	-	-	598,674	62,914	3,210,901	-	2,394	-	749,683	-	-	16,046	4,640,612	-
Average Risk Weight	0.0%	0.0%	42.0%	98.3%	98.4%	0.0%	56.9%	0.0%	99.8%	0.0%	0.0%	101.5%	44.2%	-
Deduction from Capital Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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4 Credit Risk (continued)

4.10 Credit Risk Mitigation under Standardised Approach

Credit Risk Mitigation Techniques

In addition to determining counterparty credit quality and the risk appetite, the Bank also uses various credit risk mitigation techniques to optimise credit exposure and reduce potential credit losses. Credit risk mitigants are applied in the following forms:

- Comprehensive and enforceable credit documentation with adequate terms and conditions (including covenants where deemed adequate).
- Collateral in its various forms. Key principles for collateral management include assigning realistic collateral valuations, risk and regulatory capital reduction effectiveness and cost efficiency.
- Risk transfers shifting the probability of default risk of an obligor to a third party including hedging executed by Strategic Corporate Lending ("SCL"). Other de-risking tools such as securitizations etc. may also be employed.
- Netting and collateral arrangements which reduce the credit exposure from derivatives as well as repo- and repo-style transactions.

Collateral Held as Security

The Bank regularly agrees on collateral to be received from or to be provided to customers in contracts that are subject to credit risk. Collateral is security in the form of an asset or third-party obligation that serves to mitigate the inherent risk of credit loss in an exposure, by either substituting the borrower default risk or improving recoveries in the event of a default. While collateral can be an alternative source of repayment, it does not replace the necessity of high quality underwriting standards and a thorough assessment of the debt service ability of the counterparty .

The Bank segregate collateral received into the following two types:

- Financial and other collateral, which enables the Bank to recover all or part of the outstanding exposure by liquidating the collateral asset provided, in cases where the borrower is unable or unwilling to fulfill its primary obligations. Cash collateral, securities (equity, bonds), and collateral assignments of other claims or inventory, equipment (i.e., plant, machinery) and real estate typically fall into this category.
- Guarantee collateral, which complements the borrower's ability to fulfill its obligation under the legal contract and as such is provided by third parties. Letters of credit, insurance contracts, export credit insurance, guarantees, credit derivatives and risk participations typically fall into this category.

4 Credit Risk (continued)

4.10 Credit Risk Mitigation under Standardised Approach (continued)

Collateral Held as Security (continued)

Our processes seek to ensure that the collateral the Bank accepts for risk mitigation purposes is of high quality. This includes seeking to have in place legally effective and enforceable documentation for realisable and measureable collateral assets which are evaluated regularly by dedicated teams. The assessment of the suitability of collateral for a specific transaction is part of the credit decision and must be undertaken in a conservative way, including collateral haircuts that are applied. The Bank has collateral type specific haircuts in place which are regularly reviewed and approved. In this regard, the Bank strives to avoid “wrong-way” risk characteristics where the borrower’s counterparty risk is positively correlated with the risk of deterioration in the collateral value. For guarantee collateral, the process for the analysis of the guarantor’s creditworthiness is aligned to the credit assessment process for borrowers.

Risk Transfers

Risk transfers to third parties form a key part of the Bank’s overall risk management process and are executed in various forms, including outright sales, single name and portfolio hedging, and securitisations. Risk transfers are conducted by the respective business units.

Netting and Collateral Arrangements for Derivatives and Securities Financing Transactions

Netting is applicable to over-the-counter (“OTC”) derivative transactions. Netting is also applied to securities financing transactions as far as documentation, structure and nature of the risk mitigation allows netting with the underlying credit risk.

In order to reduce the credit risk resulting from OTC derivative transactions, where central counterparty clearing is not available, the Bank regularly seeks the execution of standard master agreements (such as master agreements for derivatives published by the International Swaps and Derivatives Association, Inc. (“ISDA”) with our counterparts. A master agreement allows for the close-out netting of rights and obligations arising under derivative transactions that have been entered into under such a master agreement upon the counterparty’s default, resulting in a single net claim owed by or to the counterparty. For parts of the derivatives business (i.e. foreign exchange transactions) the Bank also enter into master agreements under which payment netting applies in respect to transactions covered by such master agreements, reducing the settlement risk. In the risk measurement and risk assessment processes, the Bank applies close-out netting only to the extent that legal validity and enforceability of the master agreement in all relevant jurisdictions are satisfied.

Also, the Bank enters into credit support annexes (“CSA”) to master agreements in order to further reduce derivatives-related credit risk. These annexes generally provide risk mitigation through periodic, usually daily margining of the covered exposure. The CSAs also provide for the right to terminate the related derivative transactions upon the counterparty’s failure to honor a margin call. As with netting, when the Bank believes the annex is enforceable, this is reflected in the exposure measurement.

4 Credit Risk (continued)

4.10 Credit Risk Mitigation under Standardised Approach (continued)

Netting and Collateral Arrangements for Derivatives and Securities Financing Transactions (continued)

Certain CSAs to master agreements provide for rating dependent triggers, where additional collateral must be pledged if a party's rating is downgraded. The Bank also enters into master agreements that provide for an additional termination event upon a party's rating downgrade. These downgrading provisions in CSAs and master agreements usually apply to both parties but may also apply to the Bank only. The Bank analyse and monitor potential contingent payment obligations resulting from a rating downgrade in the stress testing approach for liquidity risk on an ongoing basis.

Table 14 shows gross credit exposures by Basel II portfolio (Corporate, Sovereign and Bank) under the Standardised approach and the amount of risk exposure which is mitigated by BNM's defined eligible collateral, guarantees or credit derivatives.

Concentrations within Credit Risk Mitigation

Concentrations within credit risk mitigations taken may occur if a number of guarantors and credit derivative providers with similar economic characteristics are engaged in comparable activities with changes in economic or industry conditions affecting their ability to meet contractual obligations. The Bank use a range of quantitative tools and metrics to monitor credit risk mitigating activities. These also include monitoring of potential concentrations within collateral types.

Guarantees and credit derivative contracts are primarily entered into with banks and insurance companies. The majority of these exposures carry a rating within the investment grade band.

4 Credit Risk (continued)

4.10 Credit Risk Mitigation under Standardised Approach (continued)

Table 14 Credit Risk Mitigation (2022)

31-Dec-2022

Exposure Class	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
<i>Credit Risk</i>				
<i>On-Balance Sheet Exposures</i>				
Sovereigns/Central Banks	3,682,896	-	111,763	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	445,188	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	-
Corporates	1,382,837	665,651	-	-
Regulatory Retail	-	-	-	-
Residential Mortgages	2,278	-	-	-
Higher Risk Assets	-	-	-	-
Other Assets	888,941	-	-	-
Equity Exposure	13,033	-	-	-
Defaulted Exposures	1,036	-	-	-
<i>Total On-Balance Sheet Exposures</i>	<i>6,416,209</i>	<i>665,651</i>	<i>111,763</i>	<i>-</i>
<i>Off-Balance Sheet Exposures</i>				
OTC Derivatives	1,886,035	-	610,651	-
Credit Derivatives	-	-	-	-
Direct Credit Substitutes	25	-	-	-
Transaction related contingent Items	382,689	-	5,123	-
Short Term Self Liquidating trade related contingencies	18,937	-	-	-
Other commitments, such as formal standby facilities and credit lines	1,333,347	-	-	-
Defaulted Exposures	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>3,621,033</i>	<i>-</i>	<i>615,774</i>	<i>-</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>10,037,242</i>	<i>665,651</i>	<i>727,537</i>	<i>-</i>

4 Credit Risk (continued)

4.10 Credit Risk Mitigation under Standardised Approach (continued)

Table 14.1 Credit Risk Mitigation (2021)

31-Dec-2021

Exposure Class	Exposures before CRM	Exposures Covered by Guarantees/Credit Derivatives	Exposures Covered by Eligible Financial Collateral	Exposures Covered by Other Eligible Collateral
Credit Risk	RM'000	RM'000	RM'000	RM'000
<i>On-Balance Sheet Exposures</i>				
Sovereigns/Central Banks	5,009,904	-	50,723	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	580,586	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	-
Corporates	1,567,867	786,331	-	-
Regulatory Retail	-	-	-	-
Residential Mortgages	2,795	-	-	-
Higher Risk Assets	-	-	-	-
Other Assets	751,038	-	-	-
Equity Exposure	15,816	-	-	-
Defaulted Exposures	1,416	-	-	-
<i>Total On-Balance Sheet Exposures</i>	<i>7,929,422</i>	<i>786,331</i>	<i>50,723</i>	<i>-</i>
<i>Off-Balance Sheet Exposures</i>				
OTC Derivatives	1,581,248	-	353,021	-
Credit Derivatives	-	-	-	-
Direct Credit Substitutes	-	-	-	-
Transaction related contingent Items	285,005	-	4,724	-
Short Term Self Liquidating trade related contingencies	23,707	-	-	-
Other commitments, such as formal standby facilities and credit lines	1,082,745	-	-	-
Defaulted Exposures	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>2,972,705</i>	<i>-</i>	<i>357,745</i>	<i>-</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>10,902,127</i>	<i>786,331</i>	<i>408,468</i>	<i>-</i>

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4 Credit Risk (continued)

4.11 Off Balance Sheet Exposures and Counterparty Credit Risk (“CCR”)

Credit Exposure

The Bank defines its credit exposure as all transactions where losses might occur due to the fact that counterparties may not fulfill their contractual payment obligations. Counterparty credit exposure arises from the Bank’s traditional non-trading lending activities which include elements such as loans and contingent liabilities. Counterparty credit exposure also arises via the Bank’s direct trading activity with clients in certain instruments which include OTC derivatives, FX forwards and Forward Rate Agreements. A default risk also arises from the Bank’s positions in traded credit products such as bonds. The Bank calculates the gross amount of the exposure without taking into account any collateral, other credit enhancement or credit risk mitigating transactions. In Table 15 below, the Bank shows details about several of its main credit exposure categories, namely loans, irrevocable lending commitments, contingent liabilities, OTC derivatives, tradable assets and repo style transactions following the FRS-principles for consolidation.

Credit Exposure from Derivatives

Exchange-traded derivative transactions (e.g. futures and options) are regularly settled through a central counterparty, the rules and regulations of which provide for daily margining of all current and future credit risk positions emerging out of such transactions.

The credit risk arising from all financial derivatives is managed as part of the overall lending limits to banks and customers. Also, the Bank enters into CSA master agreements in order to further reduce the Bank’s derivatives-related credit risk. These CSA generally provide risk mitigation through periodic (usually daily) margining of the covered exposure. The CSA also provides for the right to terminate the related derivative transactions upon the counterparty’s failure to honor a margin call. As with netting, when the Bank believes the CSA is enforceable, the Bank reflects this in its exposure measurement.

Exposure value calculation

In respect of exposure value calculation for regulatory capital purposes, OTC traded products are calculated according to the CCR mark to market method. This is calculated as a sum of the current replacement cost and the potential future credit exposure. The current replacement cost is the MYR equivalent amount owed by the counterparty to the Bank for various financial derivative transactions. The potential future credit exposure is an add-on based on a percentage of the notional principal of each transaction. Such percentages are prescribed by BNM in the Basel II - RWCAF guidelines and vary according to the underlying asset class and tenor of each trade.

4 Credit Risk (continued)

4.11 Off Balance Sheet Exposures and Counterparty Credit Risk (“CCR”) (continued)

Credit Risk Limit Setting and Monitoring Credit Limits

Credit limits set forth the maximum credit exposures the Bank is willing to assume over specified periods. They relate to products, conditions of the exposure and other factors. Credit limits are established by the DB Group CRM function via the execution of assigned credit authorities. Credit authority reflects the mandate to approve new credit limits as well as increases or the extension of existing credit limits. Credit authority is generally assigned to individuals as personal credit authority according to the individual’s professional qualification and experience.

Ongoing active monitoring and management of credit risk positions is an integral part of the Bank’s credit risk management activities. Monitoring tasks are primarily performed by the divisional risk units in close cooperation with the Bank’s portfolio management function.

Credit counterparties are allocated to credit officers. The individual credit officers have the relevant expertise and experience to manage the credit risks associated with these counterparties and their associated credit related transactions. It is the responsibility of each credit officer to undertake ongoing credit monitoring for their allocated portfolio of counterparties. The Bank also has procedures in place intended to identify at an early stage credit exposures for which there may be an increased risk of loss. In instances where the Bank has identified counterparties where problems might arise, the respective exposure is generally placed on a watchlist. The Bank aims to identify counterparties that, on the basis of the application of the Bank’s risk management tools, demonstrate the likelihood of problems well in advance in order to effectively manage the credit exposure and maximise the recovery. The objective of this early warning system is to address potential problems while adequate options for action are still available. This early risk detection is a tenet of the Bank’s credit culture and is intended to ensure that greater attention is paid to such exposures.

Credit Ratings Downgrade

The Bank has no collateral arrangements under CSA which contains rating triggers as at 31 December 2022.

Credit Derivatives

The Bank has no credit derivatives transactions for its own credit portfolio except for its intermediation activities.

4 Credit Risk (continued)

4.11 Off Balance Sheet Exposures and Counterparty Credit Risk (“CCR”) (continued)

Table 15: Off-Balance Sheet and Counterparty Credit Risk (2022)

31-Dec-2022		Positive Fair Value of Derivative Contracts	Credit Equivalent Amount	Risk Weighted Assets
Group and Bank	Principal Amount			
	RM'000	RM'000	RM'000	RM'000
Direct Credit Substitutes	25		25	25
Transaction related contingent Items	765,377		382,689	327,340
Short Term Self Liquidating trade related contingencies	94,684		18,937	18,937
Foreign exchange related contracts				
One year or less	16,532,569	89,859	333,287	302,634
Over one year to five years	1,328,986	27,386	106,595	83,497
Over five years	-	-	-	-
Interest/Profit rate related contracts				
One year or less	98,110	-	245	135
Over one year to five years	518,856	2,648	15,596	10,478
Over five years	-	-	-	-
Equity related contracts				
One year or less	-	-	-	-
Over one year to five years	-	-	-	-
Over five years	-	-	-	-
Credit Derivative Contracts				
One year or less	-	-	-	-
Over one year to five years	-	-	-	-
Over five years	-	-	-	-
OTC Derivative transactions and credit derivative contracts subject to valid bilateral netting agreements	87,259,261	1,290,633	1,430,312	320,536
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	954,401	-	477,200	477,200
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	4,280,731		856,146	856,146
Total	111,833,000	1,410,526	3,621,032	2,396,928

4 Credit Risk (continued)

4.11 Off Balance Sheet Exposures and Counterparty Credit Risk ("CCR") (continued)

Table 15.1: Off-Balance Sheet and Counterparty Credit Risk (2021)

31-Dec-2021 Group and Bank	Principal Amount	Positive Fair Value of Derivative Contracts	Credit Equivalent Amount	Risk Weighted Assets
	RM'000	RM'000	RM'000	RM'000
Direct Credit Substitutes	-		-	-
Transaction related contingent Items	570,009		285,005	265,213
Short Term Self Liquidating trade related contingencies	118,537		23,707	23,370
Foreign exchange related contracts				
One year or less	14,988,834	92,443	323,684	309,880
Over one year to five years	1,458,409	19,682	108,206	87,374
Over five years	-	-	-	-
Interest/Profit rate related contracts				
One year or less	80,000	958	1,098	770
Over one year to five years	70,000	-	1,400	920
Over five years	27,063	-	1,353	1,353
Equity related contracts				
One year or less	-	-	-	-
Over one year to five years	-	-	-	-
Over five years	-	-	-	-
Credit Derivative Contracts				
One year or less	-	-	-	-
Over one year to five years	-	-	-	-
Over five years	-	-	-	-
OTC Derivative transactions and credit derivative contracts subject to valid bilateral netting agreements	60,223,659	700,263	1,145,507	320,183
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	562,049	-	281,025	281,025
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	4,008,601		801,720	801,720
Total	82,107,161	813,346	2,972,705	2,091,808

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5 Market Risk

Market risk arises from the uncertainty concerning changes in market prices and rates (including interest rates, equity prices, foreign exchange rates and commodity prices), the correlations among them and their levels of volatility.

The primary objective of DB Group MVRM is to ensure that the DB Group's business units optimise the risk-reward relationship and do not expose it to unacceptable losses. To achieve this objective, DB Group MVRM works closely together with risk takers (the business units) and other control and support groups.

5.1 Market & Valuation Risk Management Framework

The DB Group's primary instrument to manage trading market risk is the limit setting process. The DB Group's MB, supported by DB Group MVRM, which is part of the DB Group's independent risk function, sets Group-wide value-at-risk, stress loss, and economic capital limits for market risk. DB Group MVRM sub-allocates this overall limit to the group divisions and individual business areas based on anticipated business plans and risk appetite. Within the individual business areas, the DB Group business heads may establish business limits by sub-allocating the DB Group MVRM limit down to individual portfolios or geographical regions. VaR limits (or thresholds, as the case may be) for the Bank are endorsed by the BRMC and the Bank's Board of Directors ("BOD").

In the Bank, the majority of the interest rate risk arising from non-trading asset and liability positions is transferred through internal hedges to Treasury division. Market risk in Treasury is managed through VaR for which a limit is in place.

5.2 Quantitative Risk Management Tools

Value-At-Risk ("VaR")

VaR is a quantitative measure of the potential loss (in value) of trading positions due to market movements that will not be exceeded in a defined period of time and with a defined confidence level.

The DB Group's value-at-risk for the trading businesses is based on its own internal value-at-risk model, which is calculated using a 99% confidence level and a holding period of one day. This means the DB Group estimates that there is a 1 in 100 chance that a mark-to-market loss from the DB Group's trading positions will be at least as large as the reported value-at-risk.

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5 Market Risk (continued)

5.2 Quantitative Risk Management Tools (continued)

Value-At-Risk ("VaR") (continued)

The DB Group uses historical market data to estimate value-at-risk, with an equally weighted 261 trading day history. The calculation employs Historical Simulation technique which uses historically implied correlation: historical returns between risk factors are used directly during this 261 trading day period.

The DB Group's value-at-risk model is designed to take into account the following risk factors: interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices, as well as their implied volatilities and common basis risk. The model incorporates both linear and, especially for derivatives, non-linear effects of the risk factors on the portfolio value.

The value-at-risk measure enables the DB Group to apply a constant and uniform measure across all of DB Group's trading businesses and products. It allows a comparison of risk in different businesses, and also provides a means of aggregating and netting positions within a portfolio to reflect correlations and offsets between different asset classes. Furthermore, it facilitates comparisons for the DB Group's market risk both over time and against the daily trading results.

The DB Group continuously analyses potential weaknesses of the DB Group's VaR model using statistical techniques such as back-testing, in addition to risk management experience and expert opinion. Back-testing provides an analysis of the predictive power of the value-at-risk calculations based on actual experience. The DB Group compares the hypothetical daily profits and losses under the buy-and-hold assumption with the estimates from the DB Group's value-at-risk model.

The value-at-risk measures are used by the Bank for internal control purposes. The regulatory capital computation for market risk is based on the Standardized Approach prescribed by BNM.

Market Risk Stress Testing

Stress testing is a key risk management technique, which evaluates the potential effects of extreme market events and movements on individual risk factors. It is one of the core quantitative tools used to assess the market risk of DB Group's positions and complements VaR and EC. MVRM at DB Group performs several types of stress testing to capture a variety of risks: Portfolio stress testing, Individual Business-Level stress tests, Event Risk Scenario, and also contributes to Group wide stress testing.

Portfolio Stress Testing measures the profit and loss impact of potential market events based on scenarios and different severities, which are either historical or hypothetical and defined at macro level. For individual business-level stress tests, Market Risk Managers identify relevant risk factors and develop stress scenarios relating either to macro-economic or business specific developments. Business-level stress test capture idiosyncratic and basis risks.

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5 Market Risk (continued)

5.2 Quantitative Risk Management Tools (continued)

Market Risk Stress Testing (continued)

Event Risk Scenario stress test measures the profit and loss impact of historically observed events or hypothetical situation on trading positions for specific emerging market countries and regions. The bank's trading book exposure to an individual country is stressed under a single scenario, which replicates market movements across that country in times of significant market crisis and reduced liquidity.

5.3 Standardised Approach to Market Risk Capital Charge

Under the standardised approach for market risk defined by BNM, the market risk capital charge is divided into interest / profit rate risk, equity risk, foreign exchange risk and commodities risk charges. The capital charges for interest / profit rate and equity are applied to the current market value of the interest / profit rate and equity related financial instruments or positions in the trading book. The capital charge for foreign exchange risk and commodities risk however are applied to all foreign currency and commodities positions. Some of the foreign exchange commodity positions will be reported and hence evaluated at market value, while some may be reported and evaluated at book value.

The Standardised market risk approach is based on a building block approach where standardised supervisory capital charge is applied separately to each risk category. Interest / profit rate sensitive instruments are normally affected by general risk charges in market interest / profit rate, known as general risk and charges in factors related to a specific issuer, in particular issuer's credit quality, which would affect the instrument, known as specific risk.

Interest / profit rate risk

The capital requirements for general risk are designed to capture the risk of loss arising from changes in market interest / profit rate. Positions are allocated across a maturity ladder template of time bands and the capital charge is then calculated as the sum of four components:

- The net short or long weighted position across the entire time bands;
- The smaller proportion of the matched positions in each time band to capture basis risk;
- The larger proportion of the matched positions across different time bands to capture yield curve risk; and
- A net charge or positions in options, where appropriate.

Foreign exchange risk

Under the standardised approach, single currency position and the risk inherent in a banking institution's mix of net long and short positions in different currencies need to be measured, and capital charge of 8% of the higher total net long or total net short foreign currency position will be applied.

5 Market Risk (continued)

5.4 Risk Weighted Assets and Capital Requirements for Market Risk

Table 16: Risk weighted assets and capital requirements for market risk

	31-Dec-2022	31-Dec-2021
Minimum Capital Requirement at 8%	Standardised Approach RM'000	Standardised Approach RM'000
Interest Rate Risk	97,752	70,516
Equity Position Risk	-	-
Foreign Exchange Risk	18,662	56,552
Commodity Risk	-	-
Options	41,187	18,160
Total Risk Weighted Assets for Market Risk	1,970,009	1,815,354

6 Operational Risk

Operational risk management framework

Deutsche Bank applies the European Banking Authority's Single Rulebook definition of operational risk: "Operational Risk means the risk of losses stemming from inadequate or failed internal processes, people and systems or from external events. Operational risk includes legal risks, but excludes business and reputational risk and is embedded in all banking products and activities." Operational risk forms a subset of the Bank's non-financial risks ("NFR").

Deutsche Bank's operational risk appetite sets out the amount of operational risk it is willing to accept as a consequence of doing business. The Bank take on operational risks consciously, both strategically as well as in day-to-day business. While the Bank may have no appetite for certain types of operational risk events (such as serious violations of laws or regulations and misconduct), in other cases a certain amount of operational risk must be accepted if the Bank is to achieve its business objectives. In case a residual risk is assessed to be outside our risk appetite, risk reducing actions must be undertaken, including remediating the risks, insuring risks or ceasing business.

The Operational risk management framework ("ORMF") is a set of interrelated tools and processes that are used to identify, assess, measure, monitor and mitigate the Bank's operational risks. Its components have been designed to operate together to provide a comprehensive, risk-based approach to managing the Bank's most material operational risks. ORMF components include the Group's approach to setting and adhering to operational risk appetite, the operational risk type and control taxonomies, the minimum standards for operational risk management processes including the respective tools, and the Bank's operational risk capital model.

6 Operational Risk (continued)

Organisational & governance structure

While the day-to-day management of operational risk is the primary responsibility of business divisions and infrastructure functions, where these risks are generated, Non-Financial Risk Management (“NFRM”) oversees the Group-wide management of operational risks, identifies and reports risk concentrations, and promotes a consistent application of the ORMF across the Bank. NFRM is part of the Group Risk function, the Chief Risk Office, which is headed by the Chief Risk Officer.

The Chief Risk Officer appoints the Head of NFRM who is accountable for the design, oversight and maintenance of an effective, efficient and regulatory compliant ORMF, including the operational risk capital model. The Head of NFRM monitors and challenges the ORMF’s Group wide implementation and monitors overall risk levels against the Bank’s operational risk appetite.

The Non-Financial Risk Committee (“NFRC”), which is chaired by the Chief Risk Officer, is responsible for the oversight, governance and coordination of the management of operational risk in DB Group on behalf of the Management Board, by establishing a cross-risk perspective of the key operational risks of DB Group. Its decision-making authorities include the review, advice and management of all operational risk issues that may impact the risk profile of business divisions and infrastructure functions. Several sub-fora with attendees from both the 1st and 2nd LoDs support the NFRC to effectively fulfil its mandate. In addition to the DB Group level NFRC, business divisions have established 1st LoD NFR fora for the oversight and management of operational risks on various levels of the organisation.

The governance of operational risks follows DB Group’s Three Lines of Defence (“3LoD”) approach to managing all of its financial and non-financial risks. The ORMF establishes the operational risk governance standards including the core 1st LoD and 2nd LoD roles and their responsibilities, to ensure effective risk management and appropriate independent challenge:

Operational risk requirements for the first line of defence (“1st LoD”): Risk owners as the 1st LoD have full accountability for their operational risks and manage these against a defined risk specific appetite.

Operational risk owners are those roles in the Bank whose activities generate – or who are exposed to – operational risks. As heads of business divisions and infrastructure functions, they must determine the appropriate organisational structure to identify their operational risk profile, actively manage these risks within their organisation, take business decisions on the mitigation or acceptance of operational risks to ensure they remain within risk appetite, and establish and maintain 1st LoD controls.

Operational risk requirements for the second line of defence (“2nd LoD”): Risk Type Controllers (“RTCs”) act as the 2nd LoD control functions for all sub-risk types under the overarching risk type “operational risk”.

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6 Operational Risk (continued)

Organisational & governance structure (continued)

RTCs establish the framework and define Group level risk appetite statements for the specific operational risk type they oversee. RTCs define the minimum risk management and control standards and independently monitor and challenge risk owners' implementation of these standards in their day-to-day processes, as well as their risk-taking and management activities. RTCs provide independent operational risk oversight and prepare aggregated risk type profile reporting. RTCs monitor the risk type's profile against risk appetite and have a right to veto risk decisions leading to foreseeable risk appetite breaches. As risk type experts, RTCs define the risk type and its taxonomy and support and facilitate the implementation of the risk type framework in the 1st LoD. To maintain their independence, RTC roles are located only in infrastructure functions.

Operational risk requirements for NFRM as the RTC for the overarching risk type operational risk: As the RTC / risk control function for operational risk, NFRM establishes and maintain the overarching ORMF and determines the appropriate level of capital to underpin the Group's operational risk.

- As the 2nd LoD risk control function, NFRM defines the Bank's approach to operational risk appetite and monitors its adherence, breaches and consequences. NFRM is the independent reviewer and challenger of the 1st LoD's risk and control assessments and risk management activities relating to the holistic operational risk profile of a unit (while RTCs monitor and challenge activities related to their specific risk types). NFRM provides the oversight of risk and control mitigation plans to return the Bank's operational risk to its risk appetite, where required. It also establishes and regularly reports the Bank's operational risk profile and operational top risks, i.e. the Bank's material operational risks which are outside of risk appetite.
- As the subject matter expert for operational risk, NFRM provides independent risk views to facilitate forward-looking management of operational risks, actively engages with risk owners (1st LoD) and facilitates the implementation of risk management and control standards across the Bank.
- NFRM is accountable for the design, implementation and maintenance of the approach to determine the adequate level of capital required for operational risk, for recommendation to the Management Board. This includes the calculation and allocation of operational risk capital demand and expected loss under the Advanced Measurement Approach ("AMA").

Managing our operational risk

In order to manage the broad range of sub-risk types underlying operational risk, the ORMF provides a set of tools and processes that apply to all operational risk types across the Bank. These enable the Bank to determine operational risk profile in relation to risk appetite for operational risk, to systematically identify operational risk themes and concentrations, and to define risk mitigating measures and priorities.

In 2022, we continued to mature the management of operational risks by further integrating and simplifying the risk management processes, by enhancing the central controls inventory, by upgrading system to capture and analyse OR loss events, by enhancing governance around risk appetite, and by strengthening control activities conducted by both 1st LoD and 2nd LoD functions at various levels across DB Group.

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6 Operational Risk (continued)

Managing Operational Risk (continued)

Loss data collection: Data on internal and relevant external operational risk events (with a P&L impact \geq €10,000) was independently validated in a timely manner. Material operational risk events trigger clearly defined lessons learned and read-across analyses, which are performed the 1st LoD in close collaboration between business partners, risk control and other infrastructure functions. Lessons learned reviews analyse the reasons for significant operational risk events, identify their root causes, and document appropriate remediation actions to reduce the likelihood of their reoccurrence. Read across reviews take the conclusions of the lessons learned process and seek to analyse whether similar risks and control weaknesses identified in a lessons learned review exist in other areas of the Bank, even if they have not yet resulted in problems. This allows preventative actions to be undertaken. In 2022, the self-developed application EMApp (Event Management Application) was introduced as a Group-wide loss event database for operational risk in order to record and process current loss events and to be able to take them into account in the OpRisk model. EMApp replaces dbIRS (Incident Reporting System), which has been previously used as a Group-wide loss event database. The historical data on loss events was migrated from dbIRS to EMApp, and its completeness and potential impacts on the OpRisk model were tested and document.

Scenario analysis: The Operational Risk profile was complemented by incorporate exploratory scenario analysis into day-to-day risk management activities. Scenarios Analysis is used as a risk identification and management tools that enables Risk Owners and Risk Type Controllers to explore potential exposure to risk as the basis for identifying potential gaps and weaknesses in the Bank's existing Operational Risk profile. Scenario storylines build on internal losses, Emerging Risk reviews, Top Risk concentrations, and the review of external peer OR Loss Events. We thereby systematically utilise information from actual and potential future loss events to identify thematic susceptibilities and actively seek to reduce the likelihood of similar incidents , for example through particular deep dive analyses or risk profile reviews. The Scenario Analysis process has been strengthened by further tightening the roles and responsibilities within the 1st LoD and 2nd LoD in executing scenarios. Furthermore, Scenarios Analysis continues to play an important role in Operational Resilience exercise particularly in assessing impacts on Emerging Risk themes such as the Ukraine/ Russia conflict, Energy Shortage etc., in order to assist DB Group to prepare for crisis management decisions.

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6 Operational Risk (continued)

Managing Operational Risk (continued)

Risk & Control Assessment: The Risk Control Assessment (“RCA”) process comprises of a series of bottom-up assessments of the risks generated by business divisions and infrastructure functions (1st LoDs), the effectiveness of the controls in place to manage them, and the remediation actions required to bring the risks outside of risk appetite back into risk appetite. This enables both the 1st and 2nd LoDs to have a clear view of the Bank’s material operational risks. The Bank continued to embed the dynamic trigger based approach to RCA to review risk profile on a real time basis through NFR governance meeting. We also complemented the refinement of the central control inventory which enables a greater transparency to Risk Owner on the effectiveness of the control environment that the Bank relies upon, to mitigate its operational risks through control assurance and assessment activities.

Top Risks: The Bank regularly report and perform analyses on the top risks to establish that they are appropriately mitigated. As all risks, top risks are rated in terms of both the likelihood that they could occur and the impact on the Bank should they do so, and through this assessment they are identified to be particularly material for the Bank. The reporting provides a forward-looking perspective on the impact of planned remediation and control enhancements. It also contains emerging risks and themes that have the potential to evolve as a top risk in the future. Top risk reduction programs comprise the most significant risk reduction activities that are key to bringing our operational top risk themes back within risk appetite.

Transformation Risk Assessment: To appropriately identify and manage risks from material change initiatives within the Bank, a Transformation Risk Assessment (“TRA”) process is in place to assess the impact of transformation on the Bank’s risk profile and control environment. This process considers impacts to both financial and non-financial risk types and is applicable to initiatives including regulatory initiatives, technology migrations, risk remediation projects, strategy changes, organisational changes and real estate moves within the Bank.

Risk Appetite: NFR appetite is the amount of non-financial risk the Bank is willing to accept as a consequence of doing business. The NFR appetite framework provides a common approach to measure and monitor the level of risk appetite across the firm. NFR appetite metrics are used to monitor the operational risk profile against the Bank’s defined risk appetite, and to alert the organisation to impending problems in a timely fashion.

Findings and issue management: The findings and issue management process allows the Bank to mitigate the risks associated with known control weaknesses and deficiencies, and enables management to make risk-based decisions over the need for further remediation or risk acceptance. Outputs from the findings management process must be able to demonstrate to internal and external stakeholders that the Bank is actively identifying its control weaknesses and taking steps to manage associated risks within acceptable levels of risk appetite.

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6 Operational Risk (continued)

Operational risk type frameworks

Operational Risk is a Level 1 Risk Type on DB Group's Risk Type Taxonomy and together with Reputational Risk, it forms Non-Financial Risk. The ORMF is a set of interrelated tools and processes that are used to identify, assess, measure, monitor and mitigate DB Group's operational risks according to regulatory and industry established definition of Operational Risk ("OR"). It applied to the operational sub-risk types (Level 3 and 4) on a more granular level and enabled the Bank to aggregate and monitors its Operational Risk Profile. The ORMF is complemented by the operational sub-risk type frameworks, risk management, control standards, and tools set up by the respective RTCs (2nd LoD) for the operational sub-risk types they control. These operational sub-risk types are controlled by various infrastructure functions and include the following:

- The Compliance department performs an independent 2nd level control function that protects the Bank's license to operate by promoting and enforcing compliance with the law and driving a culture of compliance and ethical conduct in the Bank. The Compliance department assists the business divisions and works with other infrastructure functions and regulators to establish and maintain a risk-based approach to the management of the Bank's compliance risks in accordance with the Bank's risk appetite and to help the Bank detect, mitigate and prevent breaches of laws and regulations. The Compliance department performs the following principal activities: the identification, assessment, mitigation, monitoring and reporting on compliance risk; performs second level controls; assist the Regulatory Management team with regulatory engagement. The results of these assessments and controls are regularly reported to the Group Management Board and Supervisory Board.
- Financial crime risks are managed by the Anti-Financial Crime ("AFC") function via maintenance and development of a dedicated program. The AFC program is based on regulatory and supervisory requirements. AFC has defined roles and responsibilities and established dedicated functions for the identification and management of financial crime risks resulting from money laundering, terrorism financing, compliance with sanctions and embargoes, the facilitation of tax evasion as well as other criminal activities including fraud, bribery and corruption and other crimes. AFC updates its strategy for financial crime prevention via regular development of internal policies processes and controls, institution-specific risk assessment and staff training.

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6 Operational Risk (continued)

Operational Risk Type Frameworks (continued)

- The Legal Department (including Group Governance and Group Data Privacy) is an independent infrastructure function mandated to provide legal advice to the Management Board, the Supervisory Board (to the extent it does not give rise to conflict of interest), business divisions and infrastructure functions and to support the Management Board in setting up and guarding the Group’s governance and control frameworks in respect of the Bank’s legal, internal corporate governance and data privacy risks. This includes in particular, but not limited to:
 - Advising the Management Board and Supervisory Board on legal aspects of their activities
 - Providing legal advice to all Deutsche Bank units to facilitate adherence to legal and regulatory requirements in relation to their activities respectively, including to support their interactions with regulatory authorities
 - Engaging and managing external lawyers used by DB Group
 - Managing the DB Group’s litigation and contentious regulatory matters, (including contentious HR matters), and managing the DB Group’s response to external regulatory enforcement investigations
 - Advising on legal aspects of internal investigations
 - Setting the global governance framework for DB Group, facilitating its cross-unit application and assessing its implementation
 - Developing and safeguarding efficient corporate governance structures suitable to support efficient decision making, to align risk and accountability based on clear and consistent roles and responsibilities
 - Maintaining DB Group’s framework for policies, procedures, and framework documents and acting as guardian for Group policies and procedures as well as framework documents
 - Advising on data privacy laws, rules and regulations and maintaining DB Group’s data privacy risk and control framework
 - Ensuring appropriate quality assurance around all of the above

- NFRM Product Governance oversees the New Product Approval (“NPA”) and Systematic Product Review (“SPR”) cross-risk processes forming a control framework designed to manage the risks associated with the implementation of new products and services, changes in products and services during their lifecycles and, the process by which they are systematically reviewed. Applicable bank-wide, the cross-risk processes cover different stages of the product lifecycle with NPA focusing on pre-implementation and SPR on post-implementation. Pre-implementation, the primary objective of the NPA process is to ensure proper assessment of all risks, both financial and non-financial, in NPA relevant products and services, as well as related processes and infrastructure. Post-implementation, the SPR process focuses on the periodic review of all products to determine if they are to remain live or need to be modified or withdrawn.

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6 Operational Risk (continued)

Operational Risk Type Frameworks (continued)

- NFRM is the RTC for a number of operational resilience risks. Its mandate includes second line oversight of controls over transaction processing activities, as well as infrastructure risks to prevent technology or process disruption, maintain the confidentiality, integrity and availability of data, records and information security, and ensure business divisions and infrastructure functions have robust plans in place to recover critical business processes and functions in the event of disruption including technical or building outage, or the effects of cyber-attack or natural disaster as well as any physical security or safety risk. NFRM RTC also manages the risks arising from the Bank's internal and external vendor engagements via the provision of a comprehensive third party risk management framework.

Measuring our operational risk

DB Group calculate and measure the regulatory and economic capital requirements for operational risk using the AMA methodology. The AMA capital calculation is based upon the loss distribution approach. Gross losses from historical internal and external loss data (Operational Riskdata eXchange Association consortium data) complemented by scenario data are used to estimate the risk profile (i.e. a loss frequency and a loss severity distribution). The loss distribution approach model includes conservatism by recognizing losses on events that arise over multiple years as single events in the historical loss profile.

Within the loss distribution approach model, the frequency and severity distributions are combined in a Monte Carlo simulation to generate potential losses over a one year time horizon. Finally, the risk mitigating benefits of insurance are applied to each loss generated in the Monte Carlo simulation. Correlation and diversification benefits are applied to the net losses in a manner compatible with regulatory requirements to arrive at a net loss distribution at Group level, covering expected and unexpected losses. Capital is then allocated to each of the business divisions considering qualitative adjustments after deducting expected loss.

The regulatory and economic capital demand calculations are performed on a quarterly basis. NFRM establishes and maintains the approach for capital demand quantification, and ensures that appropriate development, validation and change governance processes are in place, whereby the validation is performed by an independent validation function and in line with the Group's model risk management process. Locally, the Bank has adopted the Basic Indicator Approach for Operational Risk in calculating the capital requirements.

7 Liquidity Risk

The objective of the LRM is to ensure that DB Group can fulfill its payment obligations at all times for both expected and unexpected current and future cash flows and collateral needs at reasonable cost, without affecting daily operations of DB Group. All relevant and significant drivers of liquidity risk, on balance sheet as well as off-balance sheet, must be taken into account. Prices of all asset and liability types need to reflect their liquidity risk characteristics and DB Group's cost of funding.

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7 Liquidity Risk (continued)

At the country level, Treasury is responsible for overall liquidity management of the Bank, including its compliance with all applicable liquidity limits and thresholds. Day-to-day funding and cash management of the Bank is undertaken by Treasury Pool function, acting within the risk parameters set by LRM function and endorsed by the local ALCO. Liquidity risk is monitored through local liquidity regulations issued by BNM, such as the LCR, Net Stable Funding Ratio ("NSFR"), Leverage Ratio ("LR"), and an array of internal liquidity risk limits and thresholds such as daily stressed net liquidity positions, customer concentration ratio, funding matrix, etc. Ongoing liquidity risk profiles and other related topics are discussed as a regular item at the Bank ALCO meeting, as stated in the ALCO Terms of Reference ("ToR"). At the ALCO meeting, the Bank's liquidity position, the limit utilisation, changes in exposure and liquidity policy compliance is presented to the committee.

The Bank has implemented a comprehensive toolbox that ensures the prudent liquidity risk management such as stress testing and funding matrix. The liquidity stress testing reflects market-wide and bank specific shocks as well as a combination of both by relevant assets and liabilities classes to ensure the risk taken by the Bank is in line with the approved risk appetite within the 8-week stressed time horizon. The funding matrix addresses the long-term liquidity and funding risk profile of the Bank, identifies the excess or shortfall of assets over liabilities in each time bucket. The funding matrix ensures all term assets are term funded therefore reducing stress on the short term liquidity positions.

At country level, BNM has implemented LCR and NSFR effective from June 2015 and July 2020 respectively.

8 Business (Strategic) Risk Management

Management of business (strategic) risk at the Bank is fully integrated into the DB Group's strategic risk management framework.

Strategic Risk is the risk of a potential earnings downside due to revenues and / or costs underperforming plan targets. Strategic Risk may arise from poor strategic positioning, failure to execute strategy or lack of effective responses to material negative plan deviations caused by either external or internal factors (including macro, financial and idiosyncratic drivers). Strategic Risk has been defined as part of overall Business Risk.

The key aim of Strategic Risk Management is to strengthen the Bank's earnings resilience and protect it against undue earnings volatility to support overall risk appetite targets (especially CET 1 ratio and LR). DB Group aim to achieve this by identifying, assessing, limiting, mitigating and monitoring key strategic risks.

9 Reputational Risk Management

Reputational risk is defined as the risk of possible damage to DB Group's brand and reputation, and the associated risk to earnings, capital or liquidity arising from any association, action or inaction which could be perceived by stakeholders to be inappropriate, unethical or inconsistent with the Bank's values and beliefs.

The Bank has a Reputational Risk Framework in place, which covers active decision-making, before the event on those matters which are not covered by other controls, processes, frameworks and risk types, and in doing so, aims to prevent damage to DB Group's reputation wherever possible. The Reputational Risk Framework provides consistent standards for the identification, assessment and management of reputational risk issues. Reputational damage or impacts which may arise as a result of an operational failure, lack of due diligence, weak controls/ frameworks/ processes, legal/ regulatory breaches are not covered by the Reputational Risk Framework but instead are addressed separately via the associated risk type framework.

The Reputational Risk Framework is applicable across all Business Divisions and Regions.

While every employee has a responsibility to protect our reputation, the primary responsibility for the identification, assessment, management, monitoring and, if necessary, referring or reporting of reputational risk matters lies with DB Group's Business Divisions as the primary risk owners. Global reputational risk Policies and Procedures are applicable across all Business Divisions, which also have established processes through which matters, which are deemed to be a moderate reputational risk or greater are assessed, via the Unit Reputational Risk Assessment Process ("Unit RRAP").

The Unit RRAP is required to refer any material reputational risk matters to the respective Regional Reputational Risk Committee ("RRRC"). The Reputational Risk Framework also sets out a number of matters which are considered inherently higher risk from a reputational risk perspective and are therefore mandatory referrals to the RRRCs.

The RRRCs, which are 2nd LoD Committees, are responsible for ensuring the oversight, governance and coordination of the management of reputational risk in the respective region of DB Group. The RRRCs meet, as a minimum, on a quarterly basis with ad hoc meetings as required. The Group Reputational Risk Committee ("GRRC") is responsible for ensuring the oversight, governance and coordination of the management of reputational risk at DB Group on behalf of the Group Risk Committee and the MB. Additionally, the GRRC reviews cases with a Group wide impact and in exceptional circumstances, those that could not be resolved at a regional level.

10 Equity Investments in the Banking Book

Equity investments which are neither consolidated for regulatory purposes nor deducted from the Bank's own funds are held as equity positions in the regulatory banking book. In the Bank's consolidated statement of financial position, these equity investments are classified as "Equity investments at fair value through other comprehensive income".

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11 Interest Rate Risk in the Banking Book

In the Bank, the majority of the interest rate risk arising from non-trading asset and liability positions is transferred through internal match funded transactions and modelled deposits transaction to the Treasury Pool division. This internally transferred interest rate risk in Treasury Pool is managed on the basis of Value-at-Risk and PV01 with limits, as reflected in treasury portfolio figures. Market risk in Treasury is managed through VaR for which a limit is in place.

12 Islamic Banking Operations

BNM had given its approval on 22 August 2007 for the Bank to conduct Islamic banking business under Section 124 of the Banking and Financial Institutions Act 1989.

12.1 Shariah Governance

The Bank conducts Islamic Banking through its Islamic Banking Window (“IBW”) which commenced business on 20 April 2009.

The Shariah Committee was established under BNM’s “Guidelines on the Governance of Shariah Committee for the Islamic Financial Institutions” (BNM/GPS1) to advise the Board of Directors on Shariah matters in its Islamic business operations and to provide technical assistance in ensuring the Islamic banking products and services offered by the Bank and the relevant documentation are in compliance with Shariah principles. The committee currently comprises Dr Uzaimah binti Ibrahim, En Ahmad Firdaus bin Kadir and Puan Zarinah binti Mohd Yusoff.

12.2 Restricted Profit Sharing Investment Accounts (“RPSIA”)

These deposits are used to fund specific financing and follow the principle of Mudharabah which state that profits will be shared with the Bank as Mudharib and losses shall be borne solely by depositors.

In accordance with BNM’s guidelines on the Recognition and Measurement of Profit Sharing Investment Account (“PSIA”) as Risk Absorbent, the credit and market risks on the assets funded by the PSIA are excluded from the risk weighted capital ratio (“RWCR”) calculation.

12 Islamic Banking Operations (continued)

12.3 Islamic Banking Window - Capital Adequacy

The capital adequacy ratios of the Islamic banking business of the DBMB Group are computed in accordance with the Capital Adequacy Framework for Islamic Banks (“CAFIB”). The DBMB Group’s Islamic banking business has adopted the Standardised Approach for Credit Risk and Market Risk, and the Basic Indicator Approach for Operational Risk.

Table 17: Risk weighted assets and capital requirement

	2022		2021	
	Risk Weighted Assets RM'000	Min Capital Requirement at 8% RM'000	Risk Weighted Assets RM'000	Min Capital Requirement at 8% RM'000
Islamic Banking Window				
Credit Risk	-	-	-	-
Market Risk	-	-	-	-
Operational Risk	4,512	361	4,318	345
Total	4,512	361	4,318	345

Table 17.1: Risk weighted capital ratio and Tier 1 capital

	Islamic Banking Window	
	31-Dec-22 RM'000	31-Dec-21 RM'000
Tier 1 capital		
Paid-up share capital	25,000	25,000
Share premium	-	-
Other disclosed reserves	3	79
Retained profits	10,327	9,463
Less: Deferred tax assets	-	-
Total Tier 1 Capital	35,330	34,542
Tier 2 Capital		
Total Capital	35,330	34,542
Tier 1 Capital Ratio	783.023%	799.930%
Risk-Weighted Capital Ratio	783.023%	799.930%

12 Islamic Banking Operations (continued)

12.4 Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk

Table 18: Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (2022)

31-Dec-2022

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Risk-Weighted Assets Absorbed by PSIA	Total Risk-Weighted Assets after effects of PSIA	Minimum Capital Requirement at 8% *
<i>Credit Risk</i>	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
<i>On-Balance Sheet Exposures</i>						
Sovereigns/Central Banks	199,213	199,213	-	-	-	-
Public Sector Entities	-	-	-	-	-	-
Banks, Development Financial Institutions and Multilateral Insurance Companies, Securities Firms and Fund Managers	-	-	-	-	-	-
Corporates	-	-	-	-	-	-
Regulatory Retail	-	-	-	-	-	-
Residential Mortgages	-	-	-	-	-	-
Higher Risk Assets	-	-	-	-	-	-
Other Assets	-	-	-	-	-	-
Equity Exposure	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	-
<i>Total On-Balance Sheet Exposures</i>	<i>199,213</i>	<i>199,213</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Off-Balance Sheet Exposures</i>						
OTC Derivatives	-	-	-	-	-	-
Credit Derivatives	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>199,213</i>	<i>199,213</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

12 Islamic Banking Operations (continued)

12.4 Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (continued)

Table 18.1: Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (2021)

31-Dec-2021

RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Risk-Weighted Assets Absorbed by PSIA	Total Risk-Weighted Assets after effects of PSIA	Minimum Capital Requirement at 8% *
Credit Risk	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
<i>On-Balance Sheet Exposures</i>						
Sovereigns/Central Banks	261,312	261,312	-	-	-	-
Public Sector Entities	-	-	-	-	-	-
Banks, Development Financial Institutions and Multilateral Insurance Companies, Securities Firms and Fund Managers	-	-	-	-	-	-
Corporates	-	-	-	-	-	-
Regulatory Retail	-	-	-	-	-	-
Residential Mortgages	-	-	-	-	-	-
Higher Risk Assets	-	-	-	-	-	-
Other Assets	-	-	-	-	-	-
Equity Exposure	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	-
<i>Total On-Balance Sheet Exposures</i>	<i>261,312</i>	<i>261,312</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Off-Balance Sheet Exposures</i>						
OTC Derivatives	-	-	-	-	-	-
Credit Derivatives	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	-
<i>Total for Off-Balance Sheet Exposures</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Total On and Off- Balance Sheet Exposures</i>	<i>261,312</i>	<i>261,312</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

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12 Islamic Banking Operations (continued)

12.4 Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (continued)

Table 19: Islamic Banking Window - Risk Weights Under the Standardised Approach (2022)

31-Dec-2022

Risk Weights	Exposures after Netting & Credit Risk Mitigation												Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	Sovereigns and Central Banks	Public Sector Entities	Banks, DFIs and MDBs	Insurance Companies, Securities Firms and Fund Managers	Corporates	Regulatory Retail	Residential Mortgages	Higher Risk Assets	Other Assets	Specialised Financing / Investment	Securitisation	Equity Exposures		
0%	RM'000 199,213	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 199,213	RM'000 -
20%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Exposures	199,213	-	-	-	-	-	-	-	-	-	-	-	199,213	-
Risk-Weighted Assets by Exposures	0%	-	-	-	-	-	-	-	-	-	-	-	-	-
Average Risk Weight	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-
Deduction from Capital Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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12 Islamic Banking Operations (continued)

12.4 Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (continued)

Table 19.1: Islamic Banking Window - Risk Weights Under the Standardised Approach (2021)

31-Dec-2021

Risk Weights	Exposures after Netting & Credit Risk Mitigation												Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	Sovereigns and Central Banks	Public Sector Entities	Banks, DFIs and MDBs	Insurance Companies, Securities Firms and Fund Managers	Corporates	Regulatory Retail	Residential Mortgages	Higher Risk Assets	Other Assets	Specialised Financing / Investment	Securitisation	Equity Exposures		
0%	RM'000 261,312	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 -	RM'000 261,312	RM'000 -
20%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Exposures	261,312	-	-	-	-	-	-	-	-	-	-	-	261,312	-
Risk-Weighted Assets by Exposures	0%	-	-	-	-	-	-	-	-	-	-	-	-	-
Average Risk Weight	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-
Deduction from Capital Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-