(Company No. 312552-W) (Incorporated in Malaysia)

Basel II Pillar 3 Report 31 December 2017



(Company No. 312552-W) (Incorporated in Malaysia)

# Basel II Pillar 3 Report - 31 December 2017

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#### Introduction

Bank Negara Malaysia ("BNM") announced a two-phase approach for implementing the standards recommended by the Bank of 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 Bank Negara Malaysia's Capital Adequacy Framework (Capital Components and Basel II - Risk-weighted Assets) reissued on 02 March 2017 and became effective from 02 March 2017. 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 capital conservation buffer required to be maintained in the form of CET1 Capital above the minimum regulatory capital adequacy ratios requirement will be phased-in as follows:

Calendar Year	Capital Conservation Buffer
2016	0.625%
2017	1.250%
2018	1.875%
2019 onwards	2.500%

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.

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#### 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 ("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

	20	17	20	16
	Risk Weighted Assets	Min Capital Requirement at 8%	Risk Weighted Assets	Min Capital Requirement at 8%
Bank	RM'000	RM'000	RM'000	RM'000
Credit Risk	4,697,225	375,778	4,617,845	369,428
Market Risk	2,949,956	235,996	2,570,452	205,636
Operational Risk	687,157	54,973	613,663	49,093
Total	8,334,338	666,747	7,801,960	624,157
Islamic Banking Window				
Credit Risk	843	67	689	55
Market Risk	1,687	135	1,376	110
Operational Risk	3,123	250	1,866	149
Total	5,653	452	3,931	314

Table 1 - Risk Weighted Capital Ratio and Tier 1 capital

	20	2017		16
	Total Capital Ratio	CET1 / Tier 1 Capital Ratio	Total Capital Ratio	CET1 / Tier 1 Capital Ratio
Deutsche Bank (Malaysia) Berhad	21.645%	21.332%	22.187%	21.868%
Islamic Banking Window	585.865%	585.865%	791.910%	791.910%

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## 2 Capital Adequacy (continued)

## 2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 2 - Risk weighted assets and capital requirements for credit risk (2017)

31-Dec-2017

				31-Dec-2017
RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
Credit Risk	RM'000	RM'000	RM'000	RM'000
On-Balance Sheet Exposures				
Sovereigns/Central Banks #	3,262,212	3,193,170	-	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	1,837,094	1,837,094	799,184	63,935
Insurance Companies, Securities Firms and Fund	_	_	_	_
Managers				
Corporates	1,465,467	1,465,467	1,464,947	117,196
Regulatory Retail	-	-	-	-
Residential Mortgages	13,037	13,037	4,563	365
Higher Risk Assets	-	-	-	-
Other Assets	366,864	366,864	365,869	29,270
Equity Exposure	1,631	1,631	1,861	149
Defaulted Exposures	1,969	1,969	1,969	158
Total On-Balance Sheet Exposures	6,948,274	6,879,232	2,638,393	211,073
Off-Balance Sheet Exposures				
OTC Derivatives	2,056,133	1,543,391	795,627	63,648
Credit Derivatives	1,659	1,659	459	37
Direct Credit Substitutes	-	-	-	-
Transaction related contingent Items	394,592	393,551	366,594	29,328
Short Term Self Liquidating trade related contingencies	15,418	15,418	8,697	696
Other commitments, such as formal standby facilities and credit lines	898,815	898,815	887,455	70,996
Defaulted Exposures	-	-	-	-
Total for Off-Balance Sheet Exposures	3,366,617	2,852,834	2,058,832	164,705
Total On and Off- Balance Sheet Exposures	10,314,891	9,732,066	4,697,225	375,778

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

<sup>#</sup> 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%.

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## 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 (2016)

31-Dec-2016

				31-Dec-2016
RISK TYPE	Gross Exposures	Net Exposures	Risk-Weighted Assets	Minimum Capital Requirement at 8% *
Credit Risk	RM'000	RM'000	RM'000	RM'000
On-Balance Sheet Exposures				
Sovereigns/Central Banks #	4,170,750	3,562,109	-	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	2,878,723	2,878,723	1,161,921	92,954
Insurance Companies, Securities Firms and Fund Managers	-	-	-	-
Corporates	1,106,678	1,106,678	1,106,091	88,487
Regulatory Retail	-	-	-	-
Residential Mortgages	15,416	15,416	5,395	432
Higher Risk Assets	-	-	-	-
Other Assets	278,928	278,928	277,382	22,191
Equity Exposure	1,631	1,631	1,861	149
Defaulted Exposures	2,456	2,456	2,456	196
Total On-Balance Sheet Exposures	8,454,582	7,845,941	2,555,106	204,409
Off-Balance Sheet Exposures				
OTC Derivatives	3,072,123	2,058,611	1,104,648	88,371
Credit Derivatives	29,757	29,757	8,961	717
Direct Credit Substitutes	-	-	-	-
Transaction related contingent Items	362,234	361,060	335,371	26,830
Short Term Self Liquidating trade related contingencies	55,966	55,966	47,622	3,810
Other commitments, such as formal standby facilities and credit lines	577,497	577,497	566,137	45,291
Defaulted Exposures	-	-	-	-
Total for Off-Balance Sheet Exposures	4,097,577	3,082,891	2,062,739	165,019
Total On and Off- Balance Sheet Exposures	12,552,159	10,928,832	4,617,845	369,428

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer.

Table 3 - Risk weighted assets and capital requirements for market risk (2017)

31-Dec-2017

RISK TYPE	Gross Exposures		Risk Weighted Assets	Minimum Capital Requirement at 8%*
	RM'000		RM'000	RM'000
Market Risk	Long Position Short Position			
Interest Rate Risk	111,865,038	110,799,993	1,468,990	117,519
Foreign Currency Risk	314,642	998,340	1,000,027	80,002
Options	-	261	480,939	38,475
	112,179,680	111,798,594	2,949,956	235,996

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer

<sup>#</sup> 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%.

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## Capital Adequacy (continued)

#### 2.2 Risk Weighted Assets and Capital Requirements (continued)

Table 3.1 - Risk weighted assets and capital requirements for market risk (2016)

31-Dec-2016

RISK TYPE	Gross Exposures		Risk Weighted Assets	Minimum Capital Requirement at 8%
	RM'000		RM'000	RM'000
Market Risk	Long Position Short Position			
Interest Rate Risk	120,566,302	119,303,271	1,791,563	143,325
Foreign Currency Risk	504,576	103	504,576	40,366
Options	23,634	-	274,313	21,945
	121,094,512	119,303,374	2,570,452	205,636

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer

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 (2017)

31-Dec-2017

RISK TYPE	Risk Weighted Assets	Minimum Capital Requirement at 8%*
	RM'000	RM'000
Operational Risk	687,157	54,973

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer

Table 4.1 - Risk weighted assets and capital requirements for operational risk (2016)

31-Dec-2016

RISK TYPE	Risk Weighted Assets	Minimum Capital Requirement at 8%*
	RM'000	RM'000
Operational Risk	613,663	49,093

<sup>\*</sup> 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

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

<sup>\*</sup> The minimum regulatory capital requirement before including capital conservation buffer and countercyclical capital buffer

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.

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## 2 Capital Adequacy (continued)

## 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 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 collective assessment allowance and regulatory reserve.

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

## 2.3.2 Components of Capital

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

**Group and Bank** 

	Group and Bank		
	31-Dec-17	31-Dec-16	
	RM'000	RM'000	
Tier 1 capital			
Paid-up share capital	531,362	173,599	
Share premium	0	357,763	
Statutory reserve	0	174,722	
Retained profits	1,273,835	1,035,787	
Less: Deferred tax assets	(27,299)	(35,761)	
Total Common Equity Tier 1 / Tier 1 Capital	1,777,898	1,706,110	
Tier 2 Capital			
Collective assessment allowance	12,486	11,351	
Regulatory Reserve	13,558	13,558	
Total Capital	1,803,942	1,731,019	
	1,000,012	1,1.01,010	
Common equity tier 1 / Tier 1 Capital Ratio	21.332%	21.868%	
Total capital ratio	21.645%	22.187%	

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#### 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, organizational structures and measurement and monitoring processes that are closely aligned with the activities and organizational 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 Defense ("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 to assess risk in terms of capital demand. Reputational risk, 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.

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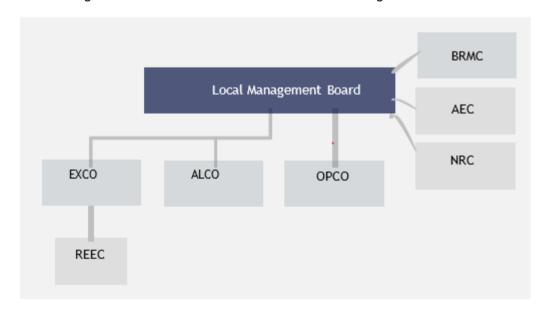
#### 3 Risk Management (continued)

## 3.1 Risk and Capital Management (continued)

#### 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 organizational and reporting requirements. The European Central Bank in connection with the relevant authorities of EU members which joined the Single Supervisory Mechanism via the Joint Supervisory Team act in cooperation as DB Group primary supervisors to monitor the Group's compliance with the German Banking Act and other applicable laws and regulations as well as the CRR/CRD 4 framework and respective implementations into German law.
- 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 and its 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 organization, 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 = Nominations and Remuneration Committee

EXCO = Executive Committee

REEC= Risk Exposure Executive Committee

ALCO = Asset and Liabilities 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 Risk Exposure Executive Committee, which is the key local approval body.

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#### 3 Risk Management (continued)

## 3.1 Risk and Capital Management (continued)

#### **Risk Culture**

The risk culture at the Bank is fully integrated in DB Group's risk culture framework and processes. This is underpinned in the below principles and practices.

DB Group seeks to promote a strong risk culture throughout the organization. It aims to help reinforce the Bank's resilience by encouraging a holistic approach to the management of risk and return throughout the organization as well as the effective management of DB Group's risk, capital and reputational profile. DB Group actively takes risks in connection with its business and as such the following principles define the risk culture within DB Group:

- Risk is taken within a defined risk appetite;
- Every risk taken needs to be approved within the risk management framework;
- Risk taken needs to be adequately compensated; and
- Risk should be continuously monitored and managed.

Employees at all levels are responsible for the management and escalation of risks. All employees are expected to exhibit behaviors that support a strong risk culture. To promote this DB Group policies require that behavior assessment is incorporated into the performance assessment and compensation processes. DB Group communicated the following risk culture behaviors through various communication vehicles:

- Being fully responsible for our risks;
- Being rigorous, forward looking and comprehensive in the assessment of risk;
- Inviting, providing and respecting challenges;
- Trouble shooting collectively; and
- Placing Deutsche Bank and its reputation at the heart of all decisions.

These behaviours are reinforced through a comprehensive risk culture training programme, as well as targeted communications and awareness campaigns.

#### Risk and Capital Management Organisation

The DB Group's Chief Risk Officer (CRO), who is a member of the DB Group Management Board, is responsible for the identification, assessment, management and reporting of risks arising within operations across all businesses and risk types. The below functional committees are central to the Risk function:

- The DB Group's Risk Committee identifies, controls and manages all risks including risk concentrations at the DB Group. To fulfil this mandate, the DB Group's Risk Committee is supported by sub-committees that are responsible for dedicated areas of risk management, including the Non-Financial Risk Committee, the Enterprise Risk Committee, and the Group Reputational Risk Committee.
- The Non-Financial Risk Committee ensures oversight and decision-making on Non-Financial Risks.
- The Group Reputational Risk Committee ensures oversight, governance and decision-making on Reputational Risks. It also provides for an appropriate look-back and lessons learnt process.
- The Enterprise Risk Committee ensures oversight and decision-making on Financial Risks and cross-risks. It
  is responsible for aggregating and analysing enterprise-wide risk information and recommending risk and
  return allocation across risks. Enterprise Risk Management will manage enterprise risk appetite and
  allocation across businesses and legal entities, integrate and aggregate risks to provide greater enterprise
  risk transparency to support decision making, govern and improve the effectiveness of risk management
  framework, and commission forward looking stress tests, and manage group recovery and resolution plans.

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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 Group Risk Committee, are responsible for the performance of the units and report directly to DB Group's Chief Risk Officer.

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

Risk appetite expresses the level of risk that the Bank is willing to assume within risk capacity in order to achieve business objectives. Risk appetite is expressed in both qualitative statements and quantitative metrics. 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 leverage 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.

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

- Articulate the Bank's risk appetite clearly via both quantitative metrics and qualitative statements;
- Detail an overall approach in communicating risk appetite across and within the Bank;
- Set ultimate boundaries for the Bank's risk/reward target setting;
- Ensure that the Bank has sufficient financial resources to support daily business at any given point in time and to absorb stressed market events;
- 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; and
- Define thresholds for each metrics at which escalation will be triggered.

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#### 3 Risk Management (continued)

## 3.2 Risk Appetite Framework (continued)

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:

<u>Risk Appetite Framework:</u> The overall approach, including policies, processes, controls, and systems through which risk appetite is established, communicated, and monitored;

<u>Risk Capacity:</u> The maximum level of risk that the Bank can assume before breaching regulatory capital and liquidity needs and its obligations to stakeholders;

<u>Risk Appetite:</u> The aggregate level of risk that the Bank is willing to assume within its risk capacity to achieve its business objectives;

Limit: Quantitative restriction on the size or amount of risk exposure based on forward looking assumptions;

<u>Risk Profile:</u> Point in time assessment of the Bank's gross and net risk exposures aggregated within, and across, each relevant risk type, business unit and legal entity based on current or forward-looking assumptions.

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:

- 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 any business activity is supported by appropriate processes and controls to minimize operational risk.
- Minimize 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).

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#### 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:

<u>Green status (within risk appetite)</u>: 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.

<u>Amber status (within risk capacity):</u> Issues that may position 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.

<u>Red status:</u> 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 the EXCO which has to review and decide if further escalations to the 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

The DB Group uses a comprehensive range of quantitative methodologies for assessing and managing risks. As a matter of policy, the 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:

#### 3.3.1 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, the Group considers economic capital, in particular for credit risk, when the Group measures the risk-adjusted profitability of its client relationships.

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- 3 Risk Management (continued)
- 3.3 Risk Management Tools (continued)

#### 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. The 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.

## 3.3.4 Stress Testing

The Bank perform 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 and regularly discussed by the EXCO and ALCO. The EXCO 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 EXCO 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 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.

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- 3 Risk Management (continued)
- 3.3 Risk Management Tools (continued)
- 3.3.4 Stress Testing (continued)

#### Credit risk stress testing

Credit risk stress tests of economic capital and also local regulatory 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 the rating migration matrix (based on Global Downturn scenario and macroeconomic stress scenarios) as provided by DB Group to stress test its Credit Risk Weighted Asset (RWA). The rating migration matrix is 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.

## Liquidity risk stress testing

The Bank is fully integrated into the 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'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 local ALCO. 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). Stress tests are discussed regularly in the local ALCO, and brought to the attention of the EXCO and the local Management Board.

## Market risk stress testing

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

## Operational risk stress testing

The Bank is fully integrated into the Group's operational risk management framework, 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 Operational Risk translates the Group operational risk stress impact into DB operational risk factors for EC and Regulatory Capital (RC) respectively. The stressed operational risk factors for EC and RC are calculated on a quarterly basis by translating the macro economic assumptions of the Global Downturn scenario into expert based 'workable' operational risk assumptions and applied on a legal entity level.

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#### 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 Risk & Capital Profile 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 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. The 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 the 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 the Group's Tier 1 capital ratio target.

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#### 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 Deutsche Bank AG or on the ability of the 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.

The Bank understands the below dimensions as key drivers for credit risk:

- "Counterparty Risk", the most significant element of credit risk, is the risk that counterparties fail to meet contractual obligations in relation to the claims described above;
- "Country Risk" arising from a country's propensity to economic and political disruption. It therefore relates to the likelihood that changes in the business environment will occur that reduce the viability of doing business in the country or region. 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;
- "Industry Risk" being the risk of adverse developments in the operating environment for a specific industry segment leading to a deterioration in the financial profile of counterparties operating in that segment and resulting in increased credit risk across this portfolio of counterparties.
- "Product Risk" being the risk driven by the underlying structure and economic dependencies of the product in question and can include factors such as tenor, recovery expectations and likelihood of having an exposure at the time of a default. This category also includes 'Settlement risk' arising from the non-simultaneous transfer of cash or securities due to the settlement or clearance of trades.

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.

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

- Accept credit risk only with creditworthy clients based on proper client due diligence
- Manage concentration risk at counterparty, product, country and industry level. Actively mitigate concentration risk through collateralization, hedging and/or distribution
- Allocate credit risk appetite by considering sustainable risk/return

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.

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#### 4 Credit Risk (continued)

#### 4.1 Credit Risk Measurement

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

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 Group credit risk EC quantification can be found in the Group's annual pillar 3 report under section "Credit Risk Economic Capital Model"

#### 4.2 Past Due Loans

The Bank considers loans to be past due once contractually agreed payments on principal and/or interest remain unpaid by the borrower. Generally the Bank distinguishes between loans that are less than three (3) months past due and loans being past due for three (3) months or more.

#### 4.3 Impairment of Loan and Allowance for Loan Losses

Loans, advances and financing of the Bank are classified as impaired when they fulfill either of the following criteria:

- principal or interest or both are past due for three (3) months or more;
- · the loan exhibits indications of significant credit weaknesses; or
- where an impaired loan has been rescheduled or restructured, the loan will continue to be classified as impaired until repayments based on the revised and/or restructured terms have been observed continuously for a period of six (6) months.

At each statement of financial position date, the Bank assesses whether there is objective evidence that a loan is impaired. A loan is impaired and impairment losses are incurred if:

- there is objective evidence of impairment as a result of a loss event that occurred after the initial recognition of the loan and up to the reporting date,
- the loss event had an impact on the estimated future cash flows of the loan, and
- a reliable estimate of the loss amount can be made

Credit Risk Management's loss assessments are subject to regular review in collaboration with Group Finance. The results of this review are reported to and approved by an oversight committee comprised of Group Finance and Risk senior management.

To allow management to determine whether a loss event has occurred on an individual basis, all significant counterparty relationships are reviewed periodically. This evaluation considers current information and events related to the counterparty, such as the counterparty experiencing significant financial difficulty or a breach of contract, for example, default or delinquency in interest or principal payments.

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#### 4 Credit Risk (continued)

## 4.3 Impairment of Loan and Allowance for Loan Losses (continued)

If there is evidence of impairment leading to an impairment loss for an individual counterparty relationship, then the amount of the loss is determined as the difference between the carrying amount of the loan, including accrued interest, and the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from foreclosure less costs for obtaining and selling the collateral. The carrying amount of the loans is reduced by the use of an allowance account and the amount of the loss is recognized in the profit or loss as a component of the provision for credit losses.

The collective assessment of impairment is principally to establish an allowance amount relating to loans that are either individually significant but for which there is no objective evidence of impairment, or are not individually significant but for which there is, on a portfolio basis, a loss amount that is probable of having occurred and is reasonably estimable.

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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			Geogra	aphy			31-Dec-17
	America	Europe	India	Malaysia	Singapore	Others	
Category	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	Total RM'000
Sovereigns/Central Banks	-	-	-	3,269,733	-	-	3,269,733
Banks, DFIs & MDBs	29,093	607,212	351,720	2,133,469	243,826	87,937	3,453,257
Public Sector Entities	-	-	-	-	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	12,268	-	-	12,268
Corporates	-	95,726	-	3,097,139	3,268	-	3,196,133
Regulatory Retails	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	13,037	-	-	13,037
Other Asset	-	-	-	366,863	-	-	366,863
Equity Exposure	-	-	-	1,631	-	-	1,631
Defaulted Exposures	-	-	-	1,969	-	-	1,969
Grand Total	29,093	702,938	351,720	8,896,109	247,094	87,937	10,314,891

Table 7.1

Credit Exposure			Geogra	aphy			31-Dec-16
	America	Europe	India	Malaysia	Singapore	Others	
Category	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	Total RM'000
Sovereigns/Central Banks	-	-	-	4,170,749	-	-	4,170,749
Banks, DFIs & MDBs	65,464	180,056	306,746	3,926,842	787,082	186,851	5,453,041
Public Sector Entities	-	-	-	-	-	-	-
Insurance Companies, Securities Firms and Fund Managers	-	-	-	12,550	-	-	12,550
Corporates	-	40,413	-	2,568,759	8,215	-	2,617,387
Regulatory Retails	-	-	-	-	-	-	-
Residential Mortgages	-	-	-	15,417	-	-	15,417
Other Asset	-	-	-	278,928	-	-	278,928
Equity Exposure	-	-	-	1,631	-	-	1,631
Defaulted Exposures	-	-	-	2,456	-	-	2,456
Grand Total	65,464	220,469	306,746	10,977,332	795,297	186,851	12,552,159

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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-17
Category	Construction	Education, Health & Others	Electricity, Gas & Water Supply	Finance, Insurance, Real Estate & Business Activities	Household	Manufacturing	Mning & Quarrying	Others	Primary Agriculture	Transport Storage	Wholesale & Retail Trade & Restaurants & Hotels	Total RM000
	RM000	RM000	RM000	RM000	RM000	RM000	RM000	RM000	RM000	RM000	RM000	
Sovereigns/Central Banks				3,269,733								3,269,733
Public Sector Entities				-			-					
Banks, DFIs & MDBs				3,453,257			-					3,453,257
Insurance Companies, Securities Firms and Fund												
Managers		3,030		9,238			-					12,268
Corporates	131,056	200	112,031	348,389		1,296,696	20,070	134,532	1,888	947,548	203,723	3,196,133
Regulatory Retail				-			-					
Residential Mortgages				-	10,463		-	2,574				13,037
Other Assets	-		-	366,863		-	-					366,863
Equity Exposure				1,631			-					1,631
Defaulted Exposures					1,969							1,969
Grand Total	131,056	3,230	112,031	7,449,111	12,432	1,296,696	20,070	137,106	1,888	947,548	203,723	10,314,891

Table 8.1

Credit Exposure						Sector						31-Dec-16
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				4,170,749			-					4,170,749
Public Sector Entities												
Banks, DFIs & MDBs				5,453,041								5,453,041
Insurance Companies, Securities Firms and Fund Managers												
		3,366		9,184			-					12,550
Corporates	108,495	500	91,484	668,151	15	1,032,250	22,860	157,270	7,974	320,938	207,450	2,617,387
Regulatory Retail				-			-					
Residential Mortgages					15,417							15,417
Other Assets				278,928								278,928
Equity Exposure				1,631			-					1,631
Defaulted Exposures					2,456							2,456
Grand Total	108,495	3,866	91,484	10,581,684	17,888	1,032,250	22,860	157,270	7,974	320,938	207,450	12,552,159

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# 4 Credit Risk (continued)

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

Table 9

Credit Exposure		Maturity		31-Dec-17
	Up to 1year	1-5 year	> 5 years	Total RM'000
Sovereigns/Central Banks	3,269,733	-	-	3,269,733
Public Sector Entities	-	-	-	-
Banks, DFIs & MDBs	2,383,087	740,691	329,479	3,453,257
Insurance Cos, Securities Firms & Fund Managers	5,918	3,320	3,030	12,268
Corporates	2,502,043	610,055	84,035	3,196,133
Regulatory Retail	-	-	-	-
Residential Mortgages	-	-	13,037	13,037
Other Assets	366,863	-	-	366,863
Equity Exposure	1,631	-	-	1,631
Defaulted Exposures	-	-	1,969	1,969
Grand Total	8,529,275	1,354,066	431,550	10,314,891

## Table 9.1

Credit Exposure		Maturity			
	Up to 1year	1-5 year	> 5 years	Total RM'000	
Sovereigns/Central Banks	4,170,749	-	-	4,170,749	
Public Sector Entities	-	-	-	-	
Banks, DFIs & MDBs	3,958,758	1,076,707	417,577	5,453,042	
Insurance Cos, Securities Firms & Fund Managers	9,184	-	3,366	12,550	
Corporates	2,217,691	342,554	57,141	2,617,386	
Regulatory Retail	-	-	-	-	
Residential Mortgages	-	-	15,417	15,417	
Other Assets	278,928	-	-	278,928	
Equity Exposure	1,631	-	-	1,631	
Defaulted Exposures	-	-	2,456	2,456	
Grand Total	10,636,941	1,419,261	495,957	12,552,159	

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## 4 Credit Risk (continued)

## 4.7 Impaired loans and impairment provisions by sector

Table 10: Impaired loans, advances and financing analysed by economic purpose which are wholly incurred in Malaysia are as follows:

	Group a	and Bank
	2017	2016
	RM'000	RM'000
Purchase of landed properties - residential	2,032	2,634
	2,032	2,634

## 4.8 Reconciliation of loan impairment provisions

Table 11: Movements in gross impaired loans, advances and financing which are all wholly incurred in Malaysia:

	Group a	and Bank
	2017	2016
	RM'000	RM'000
Balance at 1 January	2,634	2,982
Classified as impaired during the year	504	638
Reclassified as non-impaired during the year	(650)	(540)
Amount recovered	(326)	(446)
Amount written off	(130)	-
At 31 December	2,032	2,634
Gross impaired loans as a percentage of gross		
loans, advances and financing	0.08%	0.14%

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## Basel II Pillar 3 Report - 31 December 2017

## 4 Credit Risk (continued)

## 4.8 Reconciliation of loan impairment provisions (continued)

Table 11.1: Movements in collective assessment allowance for impaired loans, advances and financing which are all wholly incurred in Malaysia:

	Group and Banl 2017 RM'000	2016 RM'000
Collective Assessment Allowance		
At 1 January	16,822	9,268
Allowance made during the year	301	7,554
At 31 December	17,123	16,822

Table 11.2: Movements in individual assessment allowance for impaired loans, advances and financing which are all wholly incurred in Malaysia:

	Group an	d Bank
	2017	2016
	RM'000	RM'000
Individual Assessment Allowance	Household	Household
At 1 January	178	315
Allowance made during the year	30	126
Amount written off	(130)	-
Amount recovered	(15)	(263)
At 31 December	63	178
Direct impact to Income Statement:		
Individual assessment allowance made	(30)	(126)
Individual assessment written back	15	263
	(15)	137

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#### 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 toAa3	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%

#### **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%	
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%	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%	

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# 4 Credit Risk (continued)

# 4.9 Standardised Approach to Credit Risk (continued)

## 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%

## Table 12: Rated and Unrated Counterparties (2017)

	Ratings of Sovereigns and Central Banks by Approved ECAIs										
CREDIT EXPOSURE (31-Dec-2017)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Baa3	B1 to B3	Caa1 to C	Unrated				
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated				
On and Off Balance-Sheet Exposures											
Sovereigns/Central Banks		-	3,269,733	-	-	-	1				
Total	3,269,733	=	3,269,733	-	=	-	-				

		Ratings of Banking Institutions by Approved ECAIs									
CREDIT EXPOSURE (31-Dec-2017)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Baa3	B1 to B3	Caa1 to C	Unrated				
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated				
	RAM	AAA to AA3	A1 to A3	BBB1 to BBB3	BB1 to B3	C1 to D	Unrated				
	MARC	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	C+ to D	Unrated				
On and Off Balance-Sheet Exposures											
Banks, Development Financial Institutions & MDBs		1,164,741	849,746	689,183	-	-	749,587				
Total	3,453,257	1,164,741	849,746	689,183	-	-	749,587				

		Ratings Corporate by Approved ECAIs									
CREDIT EXPOSURE (31-Dec-2017)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated					
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated					
	RAM	AAA to AA3	A to A3	BBB1 to BB3	B to D	Unrated					
	MARC	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated					
On and Off Balance-Sheet Exposures Credit Exposures (using Corporate Risk Weights)											
Public Sector Entities		-	-	-	-	-					
Insurance Cos, Securities Firms & Fund Managers		-	-	-	-	12,268					
Corporates		14,200	34,152	2,882	-	3,144,899					
Regulatory Retail		-	-	-	-	-					
Residential Mortgages		-	-	-	-	13,037					
Other Assets		-	973	-	-	365,890					
Equity Exposure		1,348	-	-	-	283					
Defaulted Exposure		-	-	-	-	1,969					
Total	3,591,901	15,548	35,125	2,882	-	3,538,346					

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## 4 Credit Risk (continued)

## 4.9 Standardised Approach to Credit Risk (continued)

Table 12.1: Rated and Unrated Counterparties (2016)

		,									
	Ratings of Sovereigns and Central Banks by Approved ECAIs										
CREDIT EXPOSURE (31-Dec-2016)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Baa3	B1 to B3	Caa1 to C	Unrated				
, , ,	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated				
On and Off Balance-Sheet Exposures											
Sovereigns/Central Banks		-	4,170,749	-	-	-	-				
Total	4,170,749	-	4,170,749	-	-	-	-				

	Ratings of Banking Institutions by Approved ECAIs										
CREDIT EXPOSURE (31-Dec-2016)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Baa3	B1 to B3	Caa1 to C	Unrated				
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated				
	RAM	AAA to AA3	A1 to A3	BBB1 to BBB3	BB1 to B3	C1 to D	Unrated				
	MARC	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	C+ to D	Unrated				
On and Off Balance-Sheet Exposures											
Banks, Development Financial Institutions & MDBs		1,939,878	1,751,986	882,851	-	-	878,327				
Total	5,453,042	1,939,878	1,751,986	882,851		-	878,327				

		Ra	atings Corporate	by Approved ECA	Ns	
CREDIT EXPOSURE (31-Dec-2016)	Moodys	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
	RAM	AAA to AA3	A to A3	BBB1 to BB3	B to D	Unrated
	MARC	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
On and Off Balance-Sheet Exposures Credit Exposures (using Corporate Risk Weights)						
Public Sector Entities		-	-	-	-	-
Insurance Cos, Securities Firms & Fund Managers		-	-	-	-	12,550
Corporates		14,200	34,152	3,234	-	2,565,800
Regulatory Retail		-	-	-	-	0
Residential Mortgages		-	-	-	-	15,417
Other Assets		-	1,546	-	-	277,382
Equity Exposure		1,348	-	-	-	283
Defaulted Exposure		-	-	-	-	2,456
Total	2,928,368	15,548	35,698	3,234	-	2,873,888

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

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## 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 (2017)

31-Dec-201

														31-Dec-2017
					Expo	sures after Netting	& Credit Risk Mitig	ation						
Risk Weights	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	Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	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%	3,200,691	-	-	-	-	-	-	-	993	-	-	-	3,201,684	-
20%	-	-	1,078,197	3,030	14,200	-	-	-	-	-	-	-	1,095,427	219,085
35%	-	-	-	-	-	-	13,037	-	-	-	-	-	13,037	4,563
50%	-	-	1,861,950	-	35,193	-	-	-	-	-	-	-	1,897,143	948,572
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	368	9,238	3,145,700	-	1,969	-	365,869	-	-	1,611		
1250%	-	-	-	-	-	-	-	-	-	-	-	20	20	250
L														
Total Exposures	3,200,691		2,940,515	12,268	3,195,093		15,006		366,862			1,631	9,732,066	4,697,225
Exposures	3,200,691	-	2,940,515	12,200	3,195,093	-	15,006	-	300,002	-	-	1,031	9,732,000	4,097,225
Risk-Weighted Assets by														
Exposures	-	-	1,146,983	9,844	3,166,136	-	6,532	-	365,869	-	-	1,861	4,697,225	
Average Risk Weight	0.0%	0.0%	39.0%	80.2%	99.1%	0.0%	43.5%	0.0%	99.7%	0.0%	0.0%	114.1%	48.3%	
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 (2016)

														31-Dec-2016
					Expo	sures after Netting	& Credit Risk Mitig	ation						
Risk Weights	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	Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	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%	3,562,109	-	-	-	-	-	-	-	1,546	-	-	-	3,563,655	-
20%	-	-	1,620,920	3,366	14,200	-	-	-	-	-	-	-	1,638,486	327,697
35%	-	-	-	-	-	-	15,416	-	-	-	-	-	15,416	5,395
50%	-	-	2,818,180	-	35,327	-	-	-	-	-	-	-	2,853,507	1,426,753
75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100%	-	-	431	9,184	2,566,684	-	2,456	-	277,382	-	-	1,611	2,857,748	2,857,750
1250%	-	-	-	-	-	-	-	-	-	-		20	20	250
Total														
Exposures	3,562,109	-	4,439,531	12,550	2,616,211	-	17,872	-	278,928	-	-	1,631	10,928,832	4,617,845
Risk-Weighted Assets by														
Exposures	-	-	1,733,705	9,857	2,587,188	-	7,852	-	277,382	-	-	1,861	4,617,845	
Average Risk Weight	0.0%	0.0%	39.1%	78.5%	98.9%	0.0%	43.9%	0.0%	99.4%	0.0%	0.0%	114.1%	42.3%	
Deduction from Capital Base		0.070	201170	. 3.070	201070	3.070	.3.070			3.670	0.070	,	.21070	

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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 optimize 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.
- Collateral held as security to reduce losses by increasing the recovery of obligations.
- Risk transfers, which shift the probability of default risk of an obligor to a third party including hedging executed by Credit Portfolio Strategies Group.
- Netting and collateral arrangements which reduce the credit exposure from derivatives and 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 generally does not replace the necessity of high quality underwriting standards.

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.

Our processes seek to ensure that the collateral the Bank accept for risk mitigation purposes is of high quality. This includes seeking to have in place legally effective and enforceable documentation for realizable 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 strive 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 securitizations. Risk transfers are conducted by the respective business units.

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#### 4 Credit Risk (continued)

## 4.10 Credit Risk Mitigation under Standardised Approach (continued)

#### 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 allow 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 apply 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 enter 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 believe the annex is enforceable, we reflect this in our exposure measurement.

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 enter 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 us only. We analyze and monitor our potential contingent payment obligations resulting from a rating downgrade in our 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. We use a range of quantitative tools and metrics to monitor our credit risk mitigating activities. These also include monitoring of potential concentrations within collateral types.

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## 4 Credit Risk (continued)

## 4.10 Credit Risk Mitigation under Standardised Approach (continued)

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.

Table 14 Credit Risk Mitigation (2017)

31-Dec-2017

				31-Dec-2017
Exposure Class	Exposures before	Exposures Covered by		
	CRM	Guarantees/Credit		Covered by Othe
		Derivatives	Financial Collateral	Eligible
Credit Risk	RM'000	RM'000	RM'000	Collatera RM'000
On-Balance Sheet Exposures	Taw ooo	1411 000	KW 000	1111 000
Sovereigns/Central Banks	3,262,212	-	69,042	
Public Sector Entities	-	-	-	
Banks, Development Financial Institutions and Multilateral Development Banks	1,837,094	-	-	
Insurance Companies, Securities Firms and Fund	-	=	-	
Managers				
Corporates	1,465,467	982,745	-	
Regulatory Retail	-	-	-	
Residential Mortgages	13,037	-	-	
Higher Risk Assets	-	-	-	
Other Assets	366,864	-	-	
Equity Exposure	1,631	-	-	
Defaulted Exposures	1,969	-	-	
Total On-Balance Sheet Exposures	6,948,274	982,745	69,042	
Off-Balance Sheet Exposures	2.056.422		540 740	
OTC Derivatives	2,056,133	=	512,742	
Credit Derivatives	1,659	=	-	
Direct Credit Substitutes	204 500	-	4 044	
Transaction related contingent Items	394,592	-	1,041	
Short Term Self Liquidating trade related contingencies	15,418	-	-	
Other commitments, such as formal standby facilities and credit lines	898,815	-	-	,
Defaulted Exposures	-	-	-	
Total for Off-Balance Sheet Exposures	3,366,617	-	513,783	
Total On and Off- Balance Sheet Exposures	10,314,891	982,745	582,825	

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# 4 Credit Risk (continued)

## 4.10 Credit Risk Mitigation under Standardised Approach (continued)

Table 14.1 Credit Risk Mitigation (2016)

31-Dec-2016

				31-Dec-2016
Exposure Class	Exposures before	Exposures Covered by	Exposures Covered	Exposures
	CRM	Guarantees/Credit	by Eligible	Covered by Other
		Derivatives	Financial Collateral	Eligible
				Collateral
Credit Risk	RM'000	RM'000	RM'000	RM'000
On-Balance Sheet Exposures				
Sovereigns/Central Banks	4,170,750	-	608,641	-
Public Sector Entities	-	-	-	-
Banks, Development Financial Institutions and	2,878,723			
Multilateral Development Banks	2,070,723	-	-	-
Insurance Companies, Securities Firms and Fund	-	-	-	-
Managers				
Corporates	1,106,678	401,557	-	-
Regulatory Retail	-	-	-	-
Residential Mortgages	15,416	-	-	-
Higher Risk Assets	-	-	-	-
Other Assets	278,928	-	-	-
Equity Exposure	1,631	-	-	-
Defaulted Exposures	2,456	-	-	-
Total On-Balance Sheet Exposures	8,454,582	401,557	608,641	-
Off Palaman Chapt Francoura				
Off-Balance Sheet Exposures	3,072,123		1,013,512	
OTC Derivatives		_	1,013,312	-
Credit Derivatives	29,757	-	-	<u>-</u>
Direct Credit Substitutes	200 004	-	-	-
Transaction related contingent Items	362,234	-	1,174	-
Short Term Self Liquidating trade related contingencies	55,966	-	-	-
Other commitments, such as formal standby facilities	577,497	-	-	-
and credit lines				
Defaulted Exposures	4 00= ===	-	-	-
Total for Off-Balance Sheet Exposures	4,097,577	-	1,014,686	-
Total On and Off- Balance Sheet Exposures	12,552,159	401,557	1,623,327	-

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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, over-the-counter ("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 collateral support annexes ("CSA") to 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 values calculation for regulatory capital purposes, OTC traded products are calculated according to the Counterparty Credit Risk ("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.

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#### Basel II Pillar 3 Report - 31 December 2017

#### 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 Credit Risk Management 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 2017.

#### **Credit Derivatives**

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

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# 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 (2017)

31-Dec-2017		Positive Fair Value of Derivative	Credit Equivalent	Risk Weighted	
Group and Bank	Principal Amount	Contracts	Amount	Assets	
	RM'000	RM'000	RM'000	RM'000	
Direct Credit Substitutes	-		-	-	
Transaction related contingent Items	789,185		394,592	366,594	
Short Term Self Liquidating trade related contingencies	77,089		15,418	8,697	
Foreign exchange related contracts					
One year or less	10,324,163	69,086	211,993	195,970	
Over one year to five years	521,424	1,148	32,969	32,969	
Over five years	310,475	-	34,152	17,076	
Interest/Profit rate related contracts					
One year or less	493,754	670	1,592	966	
Over one year to five years	1,018,769	112,841	214,936	208,671	
Over five years	538,386	251	37,823	35,399	
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	04 265 475	1 110 500	1 524 226	205.025	
agreements	91,265,175	1,118,500	1,524,326	305,035	
Other commitments, such as formal standby facilities and credit lines, with an original maturity					
of over one year	575 454		007.705	007 705	
	575,451	-	287,725	287,725	
Other commitments, such as formal standby					
facilities and credit lines, with an original maturity of up to one year					
	3,055,448		611,090	599,730	
Total	108,969,319	1,302,496	3,366,616	2,058,832	

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# 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 (2016)

31-Dec-2016		Positive Fair Value of Derivative	Credit Equivalent	Risk Weighted
Group and Bank	Principal Amount	Contracts	Amount	Assets
	RM'000	RM'000	RM'000	RM'000
Direct Credit Substitutes	-		-	-
Transaction related contingent Items	724,468		362,234	335,371
Short Term Self Liquidating trade related contingencies	279,829		55,966	47,622
Foreign exchange related contracts				
One year or less	8,725,219	267,096	404,482	394,771
Over one year to five years	1,264,985	6,036	84,078	84,078
Over five years	310,475	-	34,152	17,076
Interest/Profit rate related contracts				
One year or less	247,678	39,654	83,038	83,038
Over one year to five years	1,187,649	7,753	31,645	18,541
Over five years	33,663	-	3,366	673
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	97,368,433	2,458,066	2,461,119	515,432
Other commitments, such as formal standby	21,223,100	_, ::3,000	_,,	2.12, 102
facilities and credit lines, with an original maturity of over one year	224,027		112,014	112,014
Other commitments, such as formal standby facilities and credit lines, with an original maturity	224,027		112,014	112,014
of up to one year	2,327,414		465,483	454,123
Total	112,693,840	2,778,605	4,097,577	2,062,739

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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 Market Risk Management (formally called Market & Liquidity Risk Management and Risk Methodology) 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 Market Risk Management works closely together with risk takers (the business units) and other control and support groups.

#### 5.1 Market Risk Management Framework

The DB Group's primary instrument to manage trading market risk is the limit setting process. The DB Group's Management Board, supported by DB Group Market Risk Management, which is part of the DB Group's independent risk function, sets Group-wide value-at-risk, stress loss, and economic capital limits for the market risk in the trading book. DB Group Market Risk Management 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 or the DB Group entities' Chief Operating Officers may establish business limits by sub-allocating the DB Group Market Risk Management 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, for the majority of the interest rate risk arising from non-trading asset and liability positions is transferred through internal hedges to the trading desks in Global Markets and is thus managed on the basis of Value-at-Risk, EC and other applicable risk metrics as reflected in the trading Value-at-Risk. Residual risk, if applicable, is managed in accordance with the requirements of the Non-Traded Market Risk (NTMR) - Interest Rate Risk in the Banking Book Policy and included in the NTMR VaR report as well as in the local RCP report. Market risk in Treasury is managed through VaR for which a limit is in place.

#### 5.2 Quantitative Risk Management Tools

#### Value-At-Risk

Value-at-risk ("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 (Continued)

The DB Group uses historical market data to estimate value-at-risk, with an equally weighted 261 trading day history. The calculation employs a Monte Carlo Simulation technique, and we assume that changes in risk factors follow a well-defined distribution, e.g. normal, lognormal, or non-normal (t, skew-t, Skew-Normal). To determine the DB Group's aggregated value-at-risk, the DB Group uses observed correlations between the risk factors 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 Standardised 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 Economic Capital. Market Risk Management DB Group performs several types of stress testing to capture a variety of risks: Portfolio stress testing, individual business-level stress tests, Event Risk Scenarios, and also contributes to Group wide stress testing.

Portfolio Stress Testing measures the profit and loss impact of potential market evens based on pre-defined scenarios of 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)

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.

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#### 5.4 Risk weighted assets and capital requirements for market risk

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

	31-Dec-2017	31-Dec-2016
Minimum Capital Requirement at 99/	Standardised Approach	Standardised Approach
Minimum Capital Requirement at 8%	RM'000	RM'000
Interest Rate Risk	117,519	143,325
Equity Position Risk	-	-
Foreign Exchange Risk	80,002	40,366
Commodity Risk	-	-
Options	38,475	21,945
Total Risk Weighted Assets for Market Risk	2,949,956	2,570,452

#### 6 Operational Risk

### Operational Risk Framework

Operational Risk means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Operational risk excludes business and reputational risk.

Group Operational Risk Management ("Group ORM") has the responsibility for the design, implementation and maintenance of the Operational Risk Management Framework ("ORMF") including the associated governance structures. Group ORM also has the responsibility for providing a cross-risk assessment and aggregation of risks to provide a holistic portfolio view of the non-financial risk profile of the Bank, which includes oversight of risk and control mitigation plans to return risk within risk appetite, where required.

We take decisions to manage operational risks, both strategically as well as in day-to-day business. Four principles form the foundation of the Operational Risk Management Framework ("ORMF") at Deutsche Bank:

Operational Risk Principle I: Risk owners have full accountability for their operational risks and have to manage against a defined risk specific appetite. Risk owners are defined to be: First Line of Defence ("LoD") (GM, CIB, Deutsche AM, PW&CC, NCOU and first LoD Infrastructure Functions), for all of their operational risks, and second LoD control functions (Infrastructure Functions), for the operational risks that arise in their own activities and processes.

Risk owners are accountable for managing all operational risks in their business/processes with an end-toend process view, within a defined operational risk specific appetite and for identifying, establishing and maintaining risk owner (i.e. Level 1) controls. In addition they mitigate identified and assessed risk within the risk specific appetite through remediation actions, insurance or by ceasing/reducing business activities.

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#### 6 Operational Risk (continued)

#### Operational Risk Framework (continued)

Divisional Control Officers, or the equivalent in infrastructure functions, support the risk owners. They are responsible for embedding the ORMF within the relevant business division or infrastructure function. They assess the effectiveness of the Level 1 Controls, monitor the aggregated risk profile and put the appropriate control and mitigating actions in place within the relevant division. The Divisional Control Officers also establish appropriate governance forums to oversee the operational risk profile and are involved in decision making processes.

- Operational Risk Principle II: Risk Type Controllers are independent second LoD control functions that control specific risk types as identified in the Operational Risk Type Taxonomy.

Risk Type Controllers are responsible for establishing an effective risk management framework for the risk type they control. They define risk type taxonomy and minimum control standards and set the risk specific appetite. Risk Type Controllers challenge, assess and report the risks in their remit and perform Level 2 Controls, complementary to the Level 1 Controls. Finally they establish independent operational risk governance, and prepare aggregated reporting into the Group Non-Financial Risk Committee.

Operational Risk Principle III: Group ORM establishes and maintains the Group Operational Risk Management Framework. Group ORM develops and maintains the Group's framework, defining the roles and responsibilities for the management of operational risk across the Bank and the process to identify, assess, mitigate, monitor, report and escalate operational risks. Group ORM also maintains the operational risk type taxonomy and oversees the completeness of coverage of risk types identified in the taxonomy by second LoD control functions, in line with the Group wide risk taxonomy standards. It also provides the tools for, and monitors execution and results of, the Group's Risk and Control Assessment process.

Group ORM also provides independent challenge of the Group's operational risk profile providing independent risk views to facilitate forward looking management of the risks. The function independently reviews, monitors and assesses material risks and key controls at a divisional and infrastructure level across the Bank. It further monitors and reports on the Group's operational risk profile in comparison to the Group Risk Appetite, to systematically identify operational risk themes and concentrations, and to oversee that risk mitigating measures and priorities have been agreed. Group ORM establishes reporting and escalating procedures up to the Management Board for risk assessment results and identified material control gaps, while informing Group Audit of material control gaps.

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#### 6 Operational Risk (continued)

#### Operational Risk Framework (continued)

- Operational Risk Principle IV: Group Operational Risk Management aims to maintain sufficient capital to underpin operational risk. Group ORM is accountable for the design, implementation and maintenance of an appropriate approach to determine a sufficient level of capital demand for operational risk for recommendation to the Management Board. To fulfill this requirement Group ORM is accountable for the calculation and allocation of operational risk capital demand and Expected Loss planning under the Advanced Measurement Approach ("AMA"). Group ORM is also accountable for the facilitation of the annual operational risk capital planning and monthly review process.

#### Organisational & Governance Structure

Group Operational Risk Management is part of the Group Risk function which is headed by the Chief Risk Officer. The Chief Risk Officer appoints the Head of Group Operational Risk Management.

Within Group ORM the Head of Group Operational Risk Management is accountable for the design, implementation and maintenance of an effective and efficient Group ORMF, including the operational risk capital model.

The Non-Financial Risk Committee, which is co-chaired by the Chief Risk Officer and the Chief Regulatory Officer, is responsible for the oversight, governance and coordination of the management of operational risk in the Group on behalf of the Management Board by establishing a cross-risk and holistic perspective of the key operational risks of the Group. Its decision-making and policy related authorities include the review, advice and management of all operational risk issues which may impact the risk profile of our business divisions and infrastructure functions.

The Head of Group Operational Risk Management is fully accountable for the setup and maintenance of the ORMF, including the adherence to all applicable legal and regulatory requirements. He is the owner of the Group's operational risk capital model and oversees its ongoing development as well as the capital calculation process. As the Model Owner, he manages relevant model risks and sets up appropriate controls. He approves quantitative and qualitative changes impacting the Group's regulatory or economic capital, within the limits defined by the Chief Risk Officer.

While the day-to-day management of operational risk is the primary responsibility of our business divisions and infra-structure functions, Group ORM oversees the Group-wide management of operational risks, identifies and reports risk concentrations and promotes a consistent application of the ORMF across the Bank.

In 2016, DB Group further embedded and refined "Three Lines of Defence" model across the Bank and the core areas of focus were on business leaders continuing to assume primary accountability for the risks and controls in their units and the second LoD Risk Type Controllers developing their risk management capabilities via the implementation of minimum standards.

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#### 6 Operational Risk (continued)

#### Managing Operational Risk

DB Group manage operational risk using the ORMF which enables us to determine our operational risk profile in comparison to our risk appetite, to systematically identify operational risk themes and concentrations, and to define risk mitigating measures and priorities.

In order to cover the broad range of risk types underlying operational risk, our framework contains a number of operational risk management techniques. These aim to efficiently manage the operational risk in our business and are used to identify, assess and mitigate operational risks:

- Loss Data Collection: The continuous collection of operational risk loss events, as a prerequisite for operational risk management, includes analyses and provision of timely information to senior management. All losses above € 10,000 are collected in our incident reporting system (dbIRS).
- The Lessons Learned process is triggered for events, including near misses, starting from € 500 thousand. This process includes, but is not limited to:
  - systematic risk analyses, including a description of the business environment in which the loss occurred, previous events, near misses and event-specific Key Risk Indicators,
  - root cause analysis,
  - review of control improvements and other actions to prevent or mitigate the recurrence, and
  - assessment of the residual risk exposure.
- The execution of corrective actions identified in this process are systematically tracked and reported monthly to senior management.
  - Scenario Analyses: DB Group complete risk profile using a set of scenarios including relevant external cases provided by a public database and additional internal scenarios. We thereby systematically utilize information on external loss events occurring in the banking industry to prevent similar incidents from happening to us, for example through particular deep dive analyses or risk profile reviews.
  - Emerging Risk Identification: DB Group assess and approve the impact of changes on the risk profile as a result of new products, outsourcing activities, strategic initiatives, acquisitions and divestments as well as material systems and process changes. Once operational risks are identified and assessed, they are compared to the relevant specific risk appetite statement and either mitigated or accepted. Risks that violate applicable national or international regulations and legislation cannot be accepted; once identified, such risks must always be mitigated.
  - Read-across Analysis: DB Group continuously seek to enhance the process to assess whether identified issues require a broader approach across multiple entities and locations within the Bank. A review of material findings is performed in order to assess their relevance to areas of the Bank other than where they originated. DB Group is developing business intelligence software to identify risk clusters across the Bank accessing various sources of information. DB Group aim to increase our predictive analysis and clustering capabilities and to identify risk concentrations in a timely manner through the use of this tool.

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#### 6 Operational Risk (continued)

#### Managing Operational Risk (continued)

- Risk Mitigation: When DB Group implement risk mitigating measures, we systematically monitor their resolution. Residual operational risks rated "significant" or above, which the risk owner decides not to remediate, need to be formally risk accepted by the risk owner of the risk bearing division. The decision is reviewed by relevant second LoD functions and Group ORM. The Non-Financial Risk Committee has the right to veto the decision.
- We perform Top Risk Analyses in which the results of the aforementioned activities are considered. The Top Risk Analyses are a primary input for the annual operational risk management strategy and planning process and aim to identify our most critical risks in terms of probability and severity.
- Key Risk Indicators are used to monitor the operational risk profile and alert the organization to impending problems in a timely fashion. Key Risk Indicators enable the monitoring of the Bank's control culture and business environment and trigger risk mitigating actions. They facilitate the forward looking management of operational risks, based on early warning signals.
- In our bottom-up Self-Assessment process areas with high risk potential are highlighted, and risk mitigating measures to resolve issues are identified. On a regular basis we conduct risk workshops aiming to evaluate risks specific to local legal entities and the countries we operate in, and take appropriate risk mitigating actions. We are in the course of replacing this existing Self-Assessment process by an enhanced Risk and Control Assessment process, supported by a group wide IT tool. During 2016, business divisions and infrastructure control functions have completed Risk and Control Assessments to achieve over 90 % risk coverage. We will complete the remaining assessments to achieve 100 % coverage with a target date of end of first quarter 2017.

Additional functions, methodologies and tools implemented by the responsible second LoD Risk Type Controllers are utilized to complement the ORMF and address specific risk types. These include:

- Compliance Risk is the current or prospective risk to earnings and capital arising from violations or non-compliance with laws, rules, regulations, agreements, prescribed practices or ethical standards and can lead to fines, damages and/ or the voiding of contracts and can diminish an institution's reputation. Compliance Risk is managed by the Bank's Compliance department (supported by the Bank's business divisions and infrastructure functions) through identification of the adherence to material rules and regulations where non-compliance could lead to endangerment of the Bank's assets as well as acting to implement effective procedures for compliance and the setup of the corresponding controls. The Compliance department further provides advisory services on the above and performs monitoring activities in relation to the coverage of new or changed material rules and regulations and assesses the corresponding control environment; regularly reporting the results to the Management Board and Supervisory Board.
- Financial Crime risks are managed by our 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, non-compliance with sanctions & embargoes as well as other criminal activities including fraud, corruption and other crimes. AFC assures further update of its strategy on financial crime prevention via regular development of internal policies and procedures, institution-specific risk analysis and staff training.

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#### 6 Operational Risk (continued)

#### Managing Operational Risk (continued)

- The Legal Department, with the assistance of its Legal Risk Management ("LRM") function, is committed to the management of the Bank's legal risk. On behalf of Legal, LRM undertakes a broad variety of tasks aimed at proactively managing legal risk, including: oversight of Legal's participation in the Risk and Control Assessment in respect of those risks for which Legal is Risk Type Controller; agreeing and participating in resulting portfolio reviews and mitigation plans; overseeing the Legal Lessons Learned process; and conducting quality assurance reviews on Le- gal's processes, thereby assessing the robustness of the legal control framework and identifying control enhancements.
- Information and Resilience Risk Management ("IRRM") is Risk Type Controller for a number of risks in our Operational Risk Type Taxonomy. These include controls over infrastructure risks to prevent technology or process disruption, maintain information security and ensure businesses have robust plans in place to recover critical business processes and functions in the event of disruption from technical or building outage, or the effects of cyber-attack or natural disaster. IRRM also manages the risks arising from the Bank's outsourced activities via the provision of a comprehensive vendor risk management framework.
- Model Risk has been classified as a material risk for the Bank and is managed by a dedicated second LoD model risk function. For further details, please refer to the standalone section on Model Risk Management in this report.

#### Measuring Operational Risk

DB Group calculate and measure the regulatory and economic capital requirements for operational risk using the Advanced Measurement Approach ("AMA") methodology. Our 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) and external scenarios from a public database (IBM OpData) complemented by internal scenario data are used to estimate the risk profile (i.e., a loss frequency and a loss severity distribution). Our Loss Distribution Approach model includes conservatism by recognizing losses on events that arise over multiple years as single events in our 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 after considering qualitative adjustments and expected loss.

The regulatory capital requirement for operational risk is derived from the 99.9 % percentile. The economic capital is set at a level to absorb at a 99.98 % percentile very severe aggregate unexpected losses within one year. Both regulatory and economic capital requirements are calculated for a time horizon of one year.

The Regulatory and Economic Capital demand calculations are performed on a quarterly basis. Group ORM aims to ensure that for the approach for capital demand quantification 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.

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#### 7 Liquidity Risk

The objective of the Liquidity Risk Management (LRM) function is to ensure that the 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.

At the country level, Treasury is responsible for overall liquidity risk management of DB Group, including the setting of liquidity risk limits. Day-to-day funding and cash management of the branch and other DB Group subsidiaries is undertaken by central Pool, acting within the parameters set by Treasury and the local Asset & Liability Committee (ALCO). Liquidity risk is monitored through local liquidity regulations issued by Bank Negara Malaysia, such as the Liquidity Coverage Ratio, and an array of internal liquidity risk limits and thresholds such as daily stressed liquidity positions, customer concentration ratio, funding matrix, etc. Overall liquidity risk process is governed by DB Malaysia liquidity risk management policy. Ongoing liquidity management is discussed as a regular item at the DB Malaysia ALCO meeting, which takes place as stated in the ALCO Terms of Reference (ToR). At the ALCO meeting, DB Malaysia's liquidity position, the limit utilization, changes in exposure and liquidity policy compliance is presented to the committee.

DB Malaysia has implemented a comprehensive toolbox that ensures the prudent liquidity risk management such as (1) Stress testing, (2) 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 DB Malaysia is in line with the approved risk appetites. The funding matrix addresses the long-term liquidity risk management issue of DB Malaysia, 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.

Further to the above, the Basel Committee published new standards for an 'International framework for liquidity risk measurement, standards and monitoring'. Within this framework two newly developed regulatory ratios have been introduced, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), as well as some additional monitoring tools. At country level, BNM has implemented LCR effective June 2015. For NSFR, exposure draft was issued by Bank Negara Malaysia in September 2017, outlining the policy requirements, reporting instructions, and providing guidance on the interpretation of key items under NSFR. This policy document will come into effect no earlier than 1 January 2019.

### Business (Strategic) Risk Management

Management of business (strategic) risk at the Bank is fully integrated into the 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 Leverage Ratios). We aim to achieve this by identifying, assessing, limiting, mitigating and monitoring key strategic risks.

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#### 7 Liquidity Risk (continued)

#### Reputational Risk Management

Management of reputational risk at the Bank is fully integrated into the Group's reputational risk management framework.

Within Group's risk management process, reputational risk is defined as the risk of possible damage to DB'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 DB's values and beliefs.

DB's reputational risk is governed by the Reputational Risk Framework. The Framework was established to provide consistent standards for the identification, assessment and management of reputational risk issues. While every employee has a responsibility to protect DB's reputation, the primary responsibility for the identification, assessment, management, monitoring and, if necessary, referring or reporting, of reputational risk matters lies with DB's Business Divisions. Each employee is under an obligation, within the scope of his/her activities, to be alert to any potential causes of reputational risk and to address them according to the Framework.

#### 8 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 "Financial investments available-for-sale ("AFS")".

#### 9 Interest Rate Risk in the Banking Book

In the Bank, for the majority of the interest rate risk arising from non-trading asset and liability positions is transferred through internal hedges to the trading desks in Global Markets and is thus managed on the basis of Value-at-Risk, EC and other applicable risk metrics as reflected in the trading Value-at-Risk. Residual risk, if applicable, is managed in accordance with the requirements of the NTMR - Interest Rate Risk in the Banking Book Policy and included in the NTMR VaR report as well as in the local RCP report. Market risk in Treasury is managed through VaR for which a limit is in place. Further details on interest rate risk in Trading Book can be found in Note 32 to the Financial Statements.

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#### 10 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.

#### 10.1 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 Hussain Hamed Sayed Hassan, Dr Muhammad Qaseem and Encik Mohd Hilmi bin Ramli.

The Bank has obtained approval from BNM to operate with 3 Shariah Committee members.

### 10.2 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 ('RWCR') calculation.

As at 31 December 2017, RPSIA assets excluded from the RWCR calculation amounted to nil (2016 Nil).

#### 10.3 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

	2	2016	2016			
	Risk Weighted	isk Weighted Min Capital		Min Capital		
	Assets	Requirement at 8%	Assets	Requirement at 8%		
Islamic Banking Window	RM'000	RM'000	RM'000	RM'000		
Credit Risk	84	3 67	689	55		
Market Risk	1,68	7 135	1,376	110		
Operational Risk	3,12	3 250	1,866	149		
Total	5,65	3 452	3,931	314		

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### 10 Islamic Banking Operations (continued)

### 10.3 Islamic Banking Window - Capital Adequacy (continued)

Table 17.1: Risk weighted capital ratio and Tier 1 capital

Islamic Banking Window

	ISIAIIIIC DAII	king window
	31-Dec-17	31-Dec-16
	RM'000	RM'000
Tier 1 capital		
Paid-up share capital	25,000	25,000
Share premium	-	-
Statutory reserve	-	-
Retained profits	8,116	6,128
Less: Deferred tax assets	-	-
Total Tier 1 Capital	33,116	31,128
Tier 2 Capital		
Collective assessment allowance	-	-
Total Capital	33,116	31,128
Less: Investments in subsidiary		
companies	-	-
Capital Base	33,116	31,128
Tier 1 Capital Ratio	585.865%	791.910%
Risk-Weighted Capital Ratio	585.865%	791.910%

The capital ratios have been computed in accordance with the Capital Adequacy Framework for Islamic Banks (CAFIB).

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### 10 Islamic Banking Operations (continued)

### 10.4 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 (2017)

31-Dec-2017

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
On-Balance Sheet Exposures						
Sovereigns/Central Banks	114,028	114,028	-	-	-	-
Public Sector Entities	-	-	-	-	-	-
Banks, Development Financial Institutions and Multilateral Development Banks	1,686	1,686	843	-	-	67
Insurance Companies, Securities Firms and Fund					_	
Managers	-				_	
Corporates	-	-	-	-	-	-
Regulatory Retail	-	-	-	-	-	-
Residential Mortgages	-	-	-	-	-	-
Higher Risk Assets	-	-	-	-	-	-
Other Assets	-	-	-	-	-	-
Equity Exposure	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	-
Total On-Balance Sheet Exposures	115,714	115,714	843	-	-	67
Off-Balance Sheet Exposures						
OTC Derivatives	-	-	-	-	-	-
Credit Derivatives	-	-	-	-	-	-
Defaulted Exposures	-	-	-	-	-	
Total for Off-Balance Sheet Exposures	-	-	-	-	-	-
Total On and Off- Balance Sheet Exposures	115,714	115,714	843	-	-	67

Table 18.1: Islamic Banking Window - Risk Weighted Assets and Capital Requirements for Credit Risk (2016)

31-Dec-2016

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			
On-Balance Sheet Exposures									
Sovereigns/Central Banks	65,793	65,793	-	-	-	-			
Public Sector Entities	-	-	-	-	-	-			
Banks, Development Financial Institutions and	1,377	1,377	689	-	-	55			
Multilateral Development Banks									
Insurance Companies, Securities Firms and Fund		_	_	=	-	_			
Managers	-								
Corporates	-	-	-	-	-	-			
Regulatory Retail	-	-	-	-	-	-			
Residential Mortgages	-	-	-	-	-	-			
Higher Risk Assets	-	-	-	-	-	-			
Other Assets	-	-	-	-	-	-			
Equity Exposure	-	-	-	-	-	-			
Defaulted Exposures	-	-	-	-	-	-			
Total On-Balance Sheet Exposures	67,170	67,170	689	-	-	55			
Off-Balance Sheet Exposures									
OTC Derivatives	-	-	-	-	-	-			
Credit Derivatives	-	-	-	-	-	-			
Defaulted Exposures	-	-	-	-	-				
Total for Off-Balance Sheet Exposures	-	-	-	-	-	-			
Total On and Off- Balance Sheet Exposures	67,170	67,170	689	-	-	55			

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10 Islamic Banking Operations (continued)

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

Table 19: Islamic Banking Window - Risk Weights Under the Standardised Approach (2017)

31-Dec-2017 **Exposures after Netting & Credit Risk Mitigation** Insurance **Total Exposures** Companies, Specialised Total Risk **Public Sector** Banks, DFIs and after Netting and Sovereigns and Residential Higher Risk Financing / Risk Weights Regulatory Retail Other Assets **Equity Exposures** Weighted Securities Firms Corporates Securitisation Mortgages Central Banks **Entities MDBs** Assets Credit Risk and Fund Investment Assets Mitigation Managers RM'000 114,028 114,028 0% 20% 35% 50% 1,686 1,686 843 75% 100% 150% Total Exposures 114,028 1,686 115,714 843 Risk-Weighted Assets Exposures 0% 843 843 Average Risk Weight 50.0% 0.7% Deduction from Capita Base

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10 Islamic Banking Operations (continued)

10.4 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 (2016)

31-Dec-2016

	Exposures after Netting & Credit Risk Mitigation											31-Dec-2016		
Risk Weights	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	Total Exposures after Netting and Credit Risk Mitigation	Total Risk Weighted Assets
	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%	65,793	-	-	-	-	-	-	-	-	-	-	-	65,793	-
20%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35% 50%	_	-	- 1,377	]		]	-			-		]	- 1,377	689
75%	-		1,077	_		_		_	_	_			-	-
100%	-		-	-		-		-	-	-	-	-	-	-
150%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Exposures	65,793	-	1,377	-	-	-	-	_	_	-	-	_	67,170	689
			.,										51,111	
Risk-Weighted Assets by														
Exposures	0%		689	-	-	-	-	-	-	-	-	-	689	
Average Risk Weight	-		50.0%										1.0%	
Deduction from Capital Base	-		-					-	-					