

UNITED OVERSEAS BANK (MALAYSIA) BHD
(Company No. 271809 K)
AND ITS SUBSIDIARY COMPANIES
(Incorporated in Malaysia)

PILLAR 3 DISCLOSURE
31 DECEMBER 2018

Domiciled in Malaysia
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Attestation by Chief Executive Officer pursuant to BASEL II- Pillar 3 Disclosures for the financial year ended 31 December 2018

I hereby confirm that the Pillar 3 disclosures for the financial year ended 31 December 2018 have been prepared in accordance with Bank Negara Malaysia's Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Banks (CAFIB) – Disclosure Requirements (Pillar 3). The Pillar 3 disclosures are consistent with the manner that the risks are assessed and managed, and are not misleading in any particular way.



Wong Kim Choong
Chief Executive Officer



Date: February 11, 2019

1. INTRODUCTION

Pillar 3 Disclosure

This Pillar 3 Disclosure document is prepared in accordance with the requirements under Bank Negara Malaysia Risk Weighted Capital Adequacy Framework (Basel II) - Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Banks (CAFIB) - Disclosure Requirements (Pillar 3). The disclosures are to facilitate the understanding of United Overseas Bank (Malaysia) Bhd (UOBM)'s risk profile and assessment of the Bank's capital adequacy. This is to be read in conjunction with the Bank's financial statements.

Effective July 2016, UOBM started to offer Islamic financial services under its Islamic Banking Window.

Scope of Application

In accordance with the accounting standards for financial reporting, all subsidiaries of the Bank are fully consolidated from the date the Bank obtains control until the date such control ceases. The Bank's investment in an associate is accounted for using the equity method from the date the Bank obtains significant influence over the associate until the date such significant influence ceases. For the purpose of computing capital adequacy requirements at the Bank level, investment in subsidiaries and investment in an associate are deducted from regulatory capital in compliance with Bank Negara Malaysia's Capital Adequacy Framework (Capital Components).

The transfer of funds or regulatory capital within the UOBM Group, if any, is generally subject to regulatory approval.

2. CAPITAL ADEQUACY

Our approach to capital management is to ensure that the UOBM Group maintains strong capital levels to support our businesses and growth, meet regulatory capital requirements at all times and maintain a good credit rating.

We achieve these objectives through the UOBM Group's Internal Capital Adequacy Assessment Process (ICAAP) whereby we actively monitor and manage the Group's capital position over a medium-term horizon, involving the following:

- setting capital targets for the Bank. As part of this, we take into account future regulatory changes and stakeholder expectations;
- forecasting capital demand for material risks based on the Bank's risk appetite. This is evaluated across all business segments and includes the UOBM Group's capital position before and after mitigation actions under adverse but plausible stressed conditions; and
- determining the availability and composition of different capital components.

Two committees oversee our capital planning and assessment process. The Risk Management Committee assists the Board with the management of risks arising from the business of the UOBM Group while the Risk and Capital Committee manages the UOBM Group's ICAAP, overall risk profile and capital requirements. The UOBM Group's capital position, capital management plan, contingency capital plan, as well as any capital management actions, are submitted to the senior management team and/or to the Board for approval.

2. CAPITAL ADEQUACY (Cont'd.)

The aggregate breakdown of Risk-Weighted Assets (RWA) by exposures in each category of the Bank for the financial year ended 31 December 2018 was as follows:

Item	Exposure class 2018	Exposures pre Credit Risk Mitigation (CRM)	Exposures post Credit Risk Mitigation (CRM)	RWA	Minimum capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000
1.0	Credit risk				
1.1	Exempted exposures under the Standardised Approach (SA)				
	<i>On-balance sheet exposures</i>				
	Sovereigns/central banks	13,036,857	13,036,857	-	-
	Insurance cos, securities firms and fund managers	210	210	210	17
	Corporates	344,909	342,573	342,193	27,375
	Other assets	1,016,986	1,016,986	768,446	61,476
	Equity exposure	112,489	112,489	112,489	8,999
	Defaulted exposures	2,452	2,452	3,677	294
	Total on-balance sheet exposures	14,513,903	14,511,567	1,227,015	98,161
	<i>Off-balance sheet exposures</i>				
	OTC derivatives	123,704	123,696	49,465	3,957
	Off-balance sheet exposures other than other than OTC derivatives or credit derivatives	45,764	44,685	43,891	3,512
	Total off-balance sheet exposures	169,468	168,381	93,356	7,469
	Total on and off-balance sheet exposures (SA)	14,683,371	14,679,948	1,320,371	105,630
1.2	Exposures under the Foundation IRB approach (FIRB)				
	<i>On-balance sheet exposures</i>				
	Banks, DFIs and MDBs	12,935,681	9,562,226	1,445,910	115,673
	Insurance cos, securities firms and fund managers	40,641	17,116	4,971	398
	Corporates	31,347,682	27,525,146	27,365,003	2,189,200
	Equity (simple risk weight)	1,956	1,956	5,868	469
	Defaulted exposures	756,574	720,036	22	2
	Total on-balance sheet exposures	45,082,534	37,826,480	28,821,774	2,305,742
	<i>Off-balance sheet exposures</i>				
	OTC derivatives	1,403,256	1,401,297	700,020	56,002
	Off-balance sheet exposures other than other than OTC derivatives or credit derivatives	9,637,776	8,508,963	9,044,874	723,590
	Defaulted exposures	29,977	29,535	-	-
	Total off-balance sheet exposures	11,071,009	9,939,795	9,744,894	779,592
	Total on and off-balance sheet exposures (FIRB)	56,153,543	47,766,275	38,566,668	3,085,334

2. CAPITAL ADEQUACY (Cont'd.)

Item	Exposure class 2018	Exposures pre CRM	Exposures post CRM	RWA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000
1.3	<u>Exposures under the Advance IRB approach (AIRB)</u>				
	<i><u>On-balance sheet exposures</u></i>				
	Corporates	44,000	44,000	19,770	1,582
	Residential mortgages	33,471,450	33,471,450	3,510,475	280,838
	Qualifying revolving retail	2,704,561	2,704,561	1,078,006	86,240
	Other retail	15,809,085	15,809,085	2,788,202	223,056
	Defaulted exposures	729,115	729,115	798,512	63,881
	Total on-balance sheet exposures	52,758,211	52,758,211	8,194,965	655,597
	<i><u>Off-balance sheet exposures</u></i>				
	OTC derivatives	995	995	767	61
	Off-balance sheet exposures other than other than OTC derivatives or credit derivatives	9,612,261	9,612,261	1,203,721	96,298
	Defaulted exposures	328	328	176	14
	Total off-balance sheet exposures	9,613,584	9,613,584	1,204,664	96,373
	Total on and off-balance sheet exposures (AIRB)	62,371,795	62,371,795	9,399,629	751,970
2.0	Total exposures under IRB approach	118,525,338	110,138,070	47,966,297	3,837,304
	Total (exempted exposures and exposures under the IRB approach) after scaling factor	-	-	52,164,645	4,173,172
	<u>Large exposures risk requirement</u>	-	-	-	-
	<u>Market risk</u>	Long position	Short position		
3.0	Interest rate risk	79,258,784	76,936,333	1,350,964	108,077
	Foreign currency risk	257,994	679,604	456,482	36,519
	Commodity risk	218,874	218,671	84,599	6,768
	Options risk	-	-	83,504	6,680
4.0	<u>Operational risk (basic indicator approach)</u>			5,448,326	435,866
5.0	<u>Total RWA and capital requirements</u>			59,588,519	4,767,081

2. CAPITAL ADEQUACY (Cont'd.)

The aggregate breakdown of RWA by exposures in each category of the Bank for the financial year ended 31 December 2017 was as follows:

Item	Exposure class 2017	Exposures pre CRM	Exposures post CRM	RWA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000
1.0	<u>Credit risk</u>				
1.1	<u>Exempted exposures under the Standardised Approach (SA)</u>				
	<i>On-balance sheet exposures</i>				
	Sovereigns/central banks	15,112,480	15,112,480	-	-
	Insurance cos, securities firms and fund managers	22,226	-	-	-
	Corporates	836,392	834,169	833,901	66,712
	Other assets	692,707	692,707	570,294	45,624
	Defaulted exposures	10,742	10,742	16,112	1,289
	Total on-balance sheet exposures	16,674,547	16,650,098	1,420,307	113,625
	<i>Off-balance sheet exposures</i>				
	OTC derivatives	208,684	208,684	117,834	9,427
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	112,604	111,620	99,518	7,961
	Total off-balance sheet exposures	321,288	320,304	217,352	17,388
	Total on and off-balance sheet exposures (SA)	16,995,835	16,970,402	1,637,659	131,013
1.2	<u>Exposures under the Foundation IRB approach (FIRB)</u>				
	<i>On-balance sheet exposures</i>				
	Banks, DFIs and MDBs	7,440,557	6,625,751	938,570	75,086
	Corporates	27,527,264	23,441,427	24,408,403	1,952,672
	Equity (simple risk weight)	140,516	140,516	559,495	44,760
	Defaulted exposures	740,193	713,673	26	2
	Total on-balance sheet exposures	35,848,530	30,921,367	25,906,494	2,072,520
	<i>Off-balance sheet exposures</i>				
	OTC derivatives	1,482,456	1,478,991	716,117	57,289
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	9,464,533	8,482,571	8,127,308	650,185
	Defaulted exposures	21,649	20,948	-	-
	Total off-balance sheet exposures	10,968,638	9,982,510	8,843,425	707,474
	Total on and off-balance sheet exposures (FIRB)	46,817,168	40,903,877	34,749,919	2,779,994

2. CAPITAL ADEQUACY (Cont'd.)

Item	Exposure class 2017	Exposures pre CRM	Exposures post CRM	RWA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000
1.3	<u>Exposures under the Advance IRB approach (AIRB)</u>				
	<i>On-balance sheet exposures</i>				
	Corporates	50,211	50,211	23,292	1,863
	Residential mortgages	31,760,428	31,760,428	3,228,804	258,304
	Qualifying revolving retail	2,517,372	2,517,372	971,548	77,724
	Other retail	15,796,069	15,796,069	2,774,482	221,958
	Defaulted exposures	656,623	656,623	740,547	59,244
	Total on-balance sheet exposures	50,780,703	50,780,703	7,738,673	619,093
	<i>Off-balance sheet exposures</i>				
	OTC derivatives	3,867	3,867	3,799	304
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	9,930,000	9,930,000	1,281,633	102,531
	Defaulted exposures	512	512	754	60
	Total off-balance sheet exposures	9,934,379	9,934,379	1,286,186	102,895
	Total on and off-balance sheet exposures (AIRB)	60,715,082	60,715,082	9,024,859	721,988
	Total exposures under IRB approach	107,532,250	101,618,959	43,774,778	3,501,982
	Total (exempted exposures and exposures under the IRB approach) after scaling factor	-	-	48,038,923	3,843,114
2.0	<u>Large exposures risk requirement</u>	-	-	-	-
3.0	<u>Market risk</u>	Long position	Short position		
	Interest rate risk	66,144,843	64,315,064	659,157	52,733
	Foreign currency risk	256,715	442,915	213,591	17,087
	Commodity risk	173,597	173,600	66,250	5,300
	Options risk	-	-	47,264	3,781
4.0	<u>Operational risk (basic indicator approach)</u>			5,242,469	419,398
5.0	<u>Total RWA and capital requirements</u>			54,267,654	4,341,413

2. CAPITAL ADEQUACY (Cont'd.)

The aggregate breakdown of RWA by exposures in each category of the Islamic Banking Window for the financial year ended 31 December 2018 was as follows:

Item	Exposure class 2018	Exposures pre CRM	Exposures post CRM	RWA	RWA absorbed by PSIA	Total RWA after effects of PSIA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
1.0	<u>Credit risk</u>						
1.1	<u>Exempted exposures under SA</u>						
	<u>On-balance sheet exposures</u>						
	Sovereigns/central banks	2,808,929	2,808,929	-	-	-	-
	Other assets	19,488	19,488	19,488	-	19,488	1,559
	Total on-balance sheet exposures	2,828,417	2,828,417	19,488	-	19,488	1,559
	<u>Off-balance sheet exposures</u>						
	OTC derivatives	1,552	1,552	311	-	311	25
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	-	-	-	-	-	-
	Total off-balance sheet exposures	1,552	1,552	311	-	311	25
	Total on and off-balance sheet exposures (SA)	2,829,969	2,829,969	19,799	-	19,799	1,584
1.2	<u>Exposures under the FIRB approach</u>						
	<u>On-balance sheet exposures</u>						
	Banks, DFIs and MDBs	8,117	8,117	780	-	780	62
	Corporates	880,506	865,207	824,540	31,404	793,136	63,451
	Total on-balance sheet exposures	888,623	873,324	825,320	31,404	793,916	63,513
	<u>Off-balance sheet exposures</u>						
	OTC Derivatives	193	193	111	-	111	9
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	51,176	46,615	50,880	-	50,880	4,070
	Total off-balance sheet exposures	51,369	46,808	50,991	-	50,991	4,079
	Total on and off-balance sheet exposures (FIRB)	939,992	920,132	876,311	31,404	844,907	67,592

2. CAPITAL ADEQUACY (Cont'd.)

Item	Exposure class 2018	Exposures pre CRM	Exposures post CRM	RWA	RWA absorbed by PSIA	Total RWA after effects of PSIA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
1.3	<u>Exposures under the AIRB approach</u> <u>On-balance sheet exposures</u>						
	Corporate	-	918	555	-	555	44
	Residential mortgages	1,334,476	1,333,558	211,845	-	211,845	16,948
	Other retail	510,755	510,755	128,892	-	128,892	10,311
	Defaulted exposures	12,697	12,697	8,827	-	8,827	706
	Total on-balance sheet exposures	1,857,928	1,857,928	350,119	-	350,119	28,009
	<u>Off-balance sheet exposures</u>						
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	559,176	559,176	84,142	-	84,142	6,731
	Total off-balance sheet exposures	559,176	559,176	84,142	-	84,142	6,731
	Total on and off-balance sheet exposures (AIRB)	2,417,104	2,417,104	434,261	-	434,261	34,740
	Total exposures under IRB approach	3,357,096	3,337,236	1,310,572	31,404	1,279,168	102,332
	Total (exempted exposures and exposures under the IRB approach) after scaling factor	-	-	1,409,005	33,288	1,375,717	110,057
2.0	<u>Large exposures risk requirement</u>	-	-	-	-	-	-
3.0	<u>Market risk</u>	Long position	Short position				
	Interest rate risk	106,827	113,433	159	-	159	13
	Foreign currency risk	-	-	-	-	-	-
	Commodity risk	-	-	-	-	-	-
	Options risk	-	-	-	-	-	-
4.0	<u>Operational risk (basic indicator approach)</u>			43,348	-	43,348	3,468
5.0	<u>Total RWA and capital requirements</u>			1,452,513	33,288	1,419,224	113,538

2. CAPITAL ADEQUACY (Cont'd.)

The aggregate breakdown of RWA by exposures in each category of the Islamic Banking Window for the financial year ended 31 December 2017 was as follows:

Item	Exposure class 2017	Exposures pre CRM	Exposures post CRM	RWA	RWA absorbed by PSIA	Total RWA after effects of PSIA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
1.0	<u>Credit risk</u>						
1.1	<u>Exempted exposures under SA</u>						
	<i>On-balance sheet exposures</i>						
	Sovereigns/central banks	200,846	200,846	-	-	-	-
	Other assets	175	175	175	-	175	14
	Total on-balance sheet exposures	201,021	201,021	175	-	175	14
	Total on and off-balance sheet exposures (SA)	201,021	201,021	175	-	175	14
1.2	<u>Exposures under the FIRB approach</u>						
	<i>On-balance sheet exposures</i>						
	Banks, DFIs and MDBs	13,757	13,757	1,275	-	1,275	102
	Corporates	214,485	213,470	221,430	-	221,430	17,714
	Total on-balance sheet exposures	228,242	227,227	222,705	-	222,705	17,816
	<i>Off-balance sheet exposures</i>						
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	72,132	71,553	116,232	-	116,232	9,299
	Total off-balance sheet exposures	72,132	71,553	116,232	-	116,232	9,299
	Total on and off-balance sheet exposures (FIRB)	300,374	298,780	338,937	-	338,937	27,115

2. CAPITAL ADEQUACY (Cont'd.)

Item	Exposure class 2017	Exposures pre CRM	Exposures post CRM	RWA	RWA absorbed by PSIA	Total RWA after effects of PSIA	Min. capital requirement at 8%
		RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
1.3	Exposures under the AIRB approach						
	<u>On-balance sheet exposures</u>						
	Residential mortgages	354,450	354,450	77,771	-	77,771	6,222
	Other retail	282,590	282,590	70,760	-	70,760	5,661
	Defaulted exposures	703	703	4	-	4	-
	Total on-balance sheet exposures	637,743	637,743	148,535	-	148,535	11,883
	<u>Off-balance sheet exposures</u>						
	Off-balance sheet exposures other than OTC derivatives or credit derivatives	312,945	312,945	62,630	-	62,630	5,010
	Total off-balance sheet exposures	312,945	312,945	62,630	-	62,630	5,010
	Total on and off-balance sheet exposures	950,688	950,688	211,165	-	211,165	16,893
	Total exposures under IRB approach	1,251,062	1,249,468	550,102	-	550,102	44,008
	Total (exempted exposures and exposures under the IRB approach) after scaling factor	-	-	583,283	-	583,283	46,663
2.0	Large exposures risk requirement	-	-	-	-	-	-
3.0	Market risk	Long position	Short position				
	Interest rate risk	-	-	-	-	-	-
	Foreign currency risk	-	-	-	-	-	-
	Commodity risk	-	-	-	-	-	-
	Options risk	-	-	-	-	-	-
4.0	Operational risk (basic indicator approach)			26,768	-	26,768	2,141
5.0	Total RWA and capital requirements			610,051	-	610,051	48,804

3. CAPITAL STRUCTURE

The Bank, on 30 August 2013 issued RM500 million subordinated bonds at 4.55%p.a., maturing on 30 August 2023. However, on 30 August 2018 the RM500 million had been fully redeemed.

On 8 May 2015, the Bank had also issued RM1 billion subordinated bonds at 4.65% p.a. maturing on 8 May 2025. In addition on 25 July 2018, the Bank issued another RM600 million subordinated bonds at 4.80% p.a maturing on 25 July 2028. Both subordinated bonds are for working capital, general funding and corporate funding purposes.

For the main features of the subordinated bonds, please refer to Note 20 in the financial statements.

The capital adequacy ratios of the Group and the Bank are computed in accordance with Bank Negara Malaysia (BNM)'s Capital Adequacy Framework (Capital Components) and Basel II - Risk-weighted Assets Framework.

The capital structure of the Group and the Bank was as follows:

	Group		Bank	
	2018	2017	2018	2017
	RM'000	RM'000	RM'000	RM'000
<u>Common Equity Tier 1 (CET1)/</u>				
<u>Tier 1 Capital</u>				
Paid-up share capital	792,555	792,555	792,555	792,555
Retained profits	9,035,171	8,261,176	9,111,054	8,335,026
Other reserves	282,731	247,773	85,810	94,135
Regulatory adjustments applied in the calculation of CET1 Capital	(349,705)	(314,140)	(365,064)	(276,492)
Total CET1/Tier 1 Capital	<u>9,760,752</u>	<u>8,987,364</u>	<u>9,624,355</u>	<u>8,945,224</u>
<u>Tier 2 Capital</u>				
Tier 2 Capital instruments	1,600,000	1,500,000	1,600,000	1,500,000
Loan/financing loss provision				
- Surplus eligible provisions over expected losses	304,310	277,701	305,066	278,408
- Collective impairment provisions	26,553	29,883	16,505	20,470
Regulatory adjustments applied in the calculation of Tier 2 Capital	85,437	70,762	-	(26,712)
Total Tier 2 Capital	<u>2,016,300</u>	<u>1,878,346</u>	<u>1,921,571</u>	<u>1,772,166</u>
Total Capital	<u>11,777,052</u>	<u>10,865,710</u>	<u>11,545,926</u>	<u>10,717,390</u>

3. CAPITAL STRUCTURE (Cont'd.)

The capital adequacy ratios of the Group and the Bank were as follows:

	Group		Bank	
	2018	2017	2018	2017
CET1/Tier 1 ratio	16.200%	16.373%	16.151%	16.484%
Total Capital	19.547%	19.795%	19.376%	19.749%
CET1/Tier 1 Capital (net of proposed dividends)	15.379%	15.532%	15.321%	15.633%
Total capital (net of proposed dividends)	18.725%	18.954%	18.546%	18.899%

The capital adequacy ratios of Islamic Banking Window are computed in accordance with the BNM's Capital Adequacy Framework for Islamic Banking (Capital Components) and Basel II - Risk-weighted Assets Framework for Islamic Banking.

The capital structure of the Islamic Banking Window was as follows:

	2018 RM'000	2017 RM'000
<u>Common Equity Tier 1 (CET1)/</u>		
<u>Tier 1 Capital</u>		
Capital fund	450,000	450,000
Accumulated losses	(4,478)	(518)
Other reserves	(6)	(81)
Regulatory adjustments applied in the calculation of CET1 Capital	(4,156)	(144)
Total CET1/Tier 1 Capital	441,360	449,257
<u>Tier 2 Capital</u>		
Financing loss provision		
- Surplus eligible provisions over expected losses	8,136	1,523
- Collective impairment provisions	247	2
Total Tier 2 Capital	8,383	1,525
Total Capital	449,743	450,782

3. CAPITAL STRUCTURE (Cont'd.)

The capital adequacy ratios of the Islamic Banking Window were as follows:

	2018	2017
Before the effects of PSIA		
CET1/Tier 1 ratio	30.386%	73.643%
Total Capital	30.977%	73.893%
After the effects of PSIA		
CET1/Tier 1 Capital	31.099%	73.643%
Total Capital	31.689%	73.893%

4. RISK MANAGEMENT

Risk Management Overview

Managing risk is an integral part of our business strategy. Our risk management approach focuses on ensuring continued financial soundness and safeguarding the interests of our stakeholders, while remaining nimble to seize value-creating business opportunities in a fast changing environment. The Bank is committed to upholding high standards of corporate governance, sound risk management principles and business practices to achieve sustainable, long-term growth. The Bank continually strives towards best risk management practices to support our strategic objectives.

Our risk management strategy is targeted at ensuring proper risk governance so as to facilitate ongoing effective discovery, management and mitigation of risks arising from external factors and our business activities and to set aside adequate capital efficiently to address these risks. Risks are managed within levels established by the senior management committees and approved by the Board and its committees. The Bank has put in place a framework of policies, methodologies, tools and processes to identify, measure, monitor and manage material risks faced by the Bank.

The Bank's risk governance frameworks, policies and appetite provide the overarching principles and guidance for the Bank's risk management activities. Risk reports are regularly submitted to Management and the Board to keep them apprised of the Bank's risk profile.

Risk Management Governance and Framework

The Bank's responsibility for risk management starts with the Board overseeing a governance structure that is designed to ensure that the Bank's business activities are:

- conducted in a safe and sound manner and in line with the highest standards of professionalism;
- consistent with the Bank's overall business strategy and risk appetite; and
- subjected to adequate risk management and internal controls.

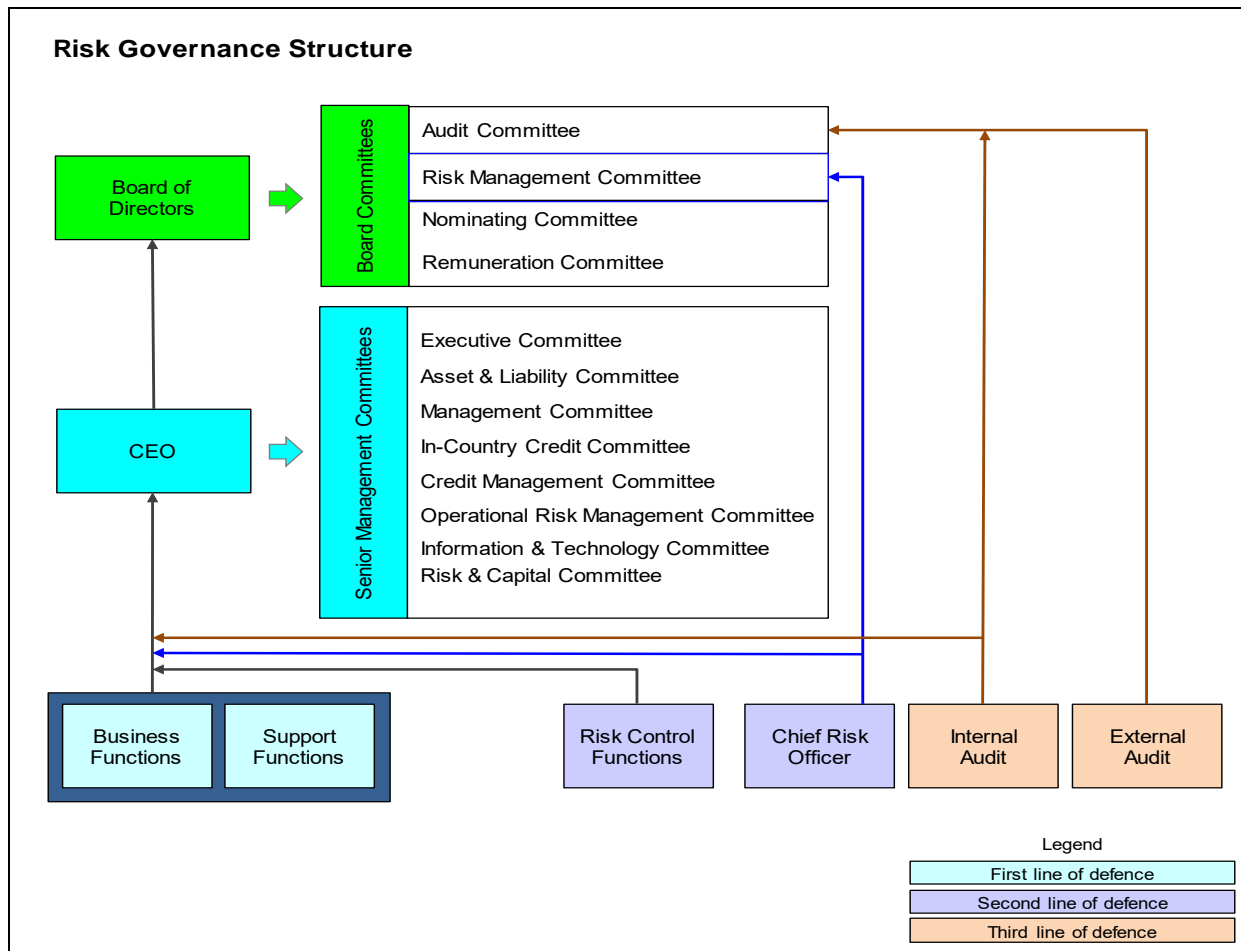
In this regard, the Board is primarily assisted by the Risk Management Committee (RMC).

The Chief Executive Officer has established senior management committees to assist in making business decisions with due consideration to risks and returns. The main senior management committees involved in this are the Executive Committee (EXCO), Management Committee (MC), Asset and Liability Committee (ALCO), In-Country Credit Committee (ICCC), Credit Management Committee (CMC), Information & Technology Committee (ITC), Operational Risk Management Committee (ORMC) and Risk and Capital Committee (RCC). These committees also assist the RMC in specific risk areas.

The RMC reviews the overall risk appetite and level of risk capital to be maintained for the Bank. Senior management and the senior management committees are authorised to delegate risk appetite limits by location, business lines, and/or broad product lines.

Risk management is also the responsibility of every employee in the Bank. Risk awareness and accountability are embedded in our culture through an established framework that ensures appropriate oversight and accountability for the effective management of risk throughout the Bank and across risk types. This is executed through an organisation control structure that provides three "Lines of Defence" as follows:

4. RISK MANAGEMENT (Cont'd.)



First Line of Defense - The Risk Owner

The business and support functions have the primary responsibility for implementing and executing effective controls for the management of risks arising from their business activities. This include establishing adequate managerial and supervisory controls to ensure compliance with risk policies, appetite and limits as well as to highlight control breakdowns, inadequacy of processes and unexpected risk events.

Second Line of Defense - Risk Oversight

The risk and control oversight functions (Risk Management and Compliance) and the Chief Risk Officer (CRO) provide the Second Line of Defense.

The risk and control oversight functions support the Bank's strategy of balancing growth with stability by establishing risk frameworks, policies, appetite and limits within which the business functions must operate. The risk and control oversight functions are also responsible for the independent review and monitoring of the Bank's risk profile and highlighting any significant vulnerabilities and risk issues to the respective management committees.

The independence of risk and control oversight functions from business functions ensures the necessary checks and balances are in place.

4. RISK MANAGEMENT (Cont'd.)

Third Line of Defense - Independent Audit

The Bank's internal and external auditors conduct risk-based audits covering all aspects of the First and Second Lines of Defence to provide independent assurance to the CEO, Audit Committee and the Board, on the effectiveness of the risk management and control structure, policies, frameworks, systems and processes.

The Bank, adopts and adapts the parent bank's governance structure, frameworks and policies accordingly to comply with local regulatory requirements. This ensures the approach across the regional UOB franchise is consistent and sufficiently flexible to suit local operating environments.

Risk Appetite

The Bank has established a risk appetite framework to define the amount of risk that the Bank is able and willing to take in pursuit of its business objectives. The objective of establishing a risk appetite framework is not to limit risk-taking but to ensure that the Bank's risk profile remains within well-defined and tolerable boundaries. The framework was formulated based on the following key criteria:

- relevance to respective stakeholders, with appropriate levels of granularity;
- practical, consistent and easy to understand metrics for communication and implementation;
- alignment to key elements of the Bank's business strategy; and
- analytically substantiated and measurable metrics.

The risk appetite defines suitable thresholds and limits across key areas including but not limited to credit risk, country risk, market risk, liquidity risk, operational risk and reputation risk. Our risk-taking approach is focused on businesses which we understand and are well equipped to manage the risk involved. Through this approach, we aim to minimise earnings volatility and concentration risk and ensure that our high credit rating, strong capital and funding base remain intact. This allows us to be a steadfast partner of our customers through changing economic conditions and cycles.

The Bank's risk appetite framework and risk appetite are reviewed and approved annually by the Board. Senior management monitors and reports the risk profiles and compliance with the risk appetite to the Board.

4. RISK MANAGEMENT (Cont'd.)

Basel Framework

The Bank has adopted the Basel Framework and observes the Bank Negara Malaysia (BNM) Risk Weighted Capital Adequacy Framework (Basel II) for banks incorporated in Malaysia. The Bank continues to adopt a prudent and proactive approach in navigating the evolving regulatory landscape, with emphasis on sound risk management principles in delivering sustainable returns.

The Bank has adopted the Foundation Internal Ratings-Based (FIRB) Approach for its non-retail exposures and the Advanced Internal Ratings-Based (AIRB) Approach for its retail exposures. For market risk, the Bank has adopted the Standardised Approach (SA). For operational risk, the Bank has adopted the Basic Indicator Approach (BIA).

The Bank has adopted the Internal Capital Adequacy Assessment Process (ICAAP) to assess on an ongoing basis the amount of capital necessary to support its activities. The ICAAP is reviewed periodically to ensure that the Bank remains well-capitalised after considering all material risks. Stress tests are conducted to determine capital adequacy under stressed conditions.

5. CREDIT RISK

Credit risk is the risk of loss arising from any failure by a borrower or counterparty to meet its financial obligations when such obligations fall due. Credit risk is the single largest risk that the Bank faces in its core business as a commercial bank, arising primarily from loans/ financing and other lending-related commitments to retail, corporate and institutional borrowers. Treasury and capital market operations, and investments also expose the Bank to counterparty and issuer credit risks.

Integral to the management of credit risk is a framework that clearly defines policies and processes relating to the measurement and management of credit risk. The framework helps to foster a robust culture of identification, measurement and management of credit risk within the Bank. The Bank adopts an holistic approach towards assessing credit risk and ensures that managing credit risk is part of an integrated approach to enterprise risk management.

The Bank's portfolio is also being reviewed and stress-tested regularly, and the Bank continuously monitors the operating environment to identify emerging risks and to formulate mitigating actions.

Credit Risk Governance and Organisation

The CMC, ICCC and EXCO are the key oversight committees for credit risk and support the CEO and RMC in managing the Bank's overall credit risk exposures. The committees serve as the executive forum for discussions on all credit-related issues including the credit risk management framework, policies, processes, infrastructure, methodologies and systems. The CMC, ICCC and EXCO also review and assess the Bank's credit portfolios and credit risk profiles.

The Credit Risk Management under Risk Management develops bank-wide credit policies and guidelines, and focuses on facilitating business development within a prudent, consistent and efficient credit risk management framework. It is responsible for the reporting, analysis and management of all elements of credit risk to CMC, ICCC, RMC and Board.

Credit Risk Policies and Processes

The Bank has established credit policies and processes to manage credit risk in the following key areas:

Credit Approval Process

To maintain the independence and integrity of the credit approval process, the credit origination and approval functions are clearly segregated. Credit approval authority is delegated to officers based on their experience, seniority and track record. All credit approval officers are guided by credit policies and credit acceptance guidelines that are periodically reviewed to ensure their continued relevance to the Bank's business strategy and business environment. Credit approval is based on a risk-adjusted scale according to a borrower's credit rating.

5. CREDIT RISK (Cont'd.)

Credit Concentration Risk

Credit concentration risk may arise from a single large exposure or from multiple exposures that are closely correlated. This is managed by setting exposure limits on borrowers, obligor groups, portfolios, industries and countries, generally expressed as a percentage of the Bank's eligible capital base.

Credit risk exposures are managed through a robust credit underwriting, structuring and monitoring process. The Bank also manages its country risk exposures within an established framework that involves setting limits for each country. Such limits are based on the country's risk rating, economic potential measured by its gross domestic product and the Bank's business strategy. Regular assessments of emerging risks and in-depth reviews of industry trends are performed to provide a forward-looking view on developments that could impact the Bank's portfolio.

Credit Stress Test

Credit stress testing is a core component of the Bank's credit portfolio management process. Various regulatory and internal stress tests are conducted periodically. The main purpose of credit stress testing is to provide a forward-looking assessment of the Bank's credit portfolio under adverse economic scenarios. Under stress scenarios such as a severe recession, significant losses from the credit portfolio may occur. Stress tests are used to assess if the Bank's capital can withstand such losses and their impact on profitability and balance sheet quality. Stress tests also help us to identify the vulnerability of various business units and would enable us to formulate appropriate mitigating actions.

The Bank's stress test scenarios consider potential and plausible macroeconomic and geopolitical events in varying degrees of likelihood and severity. These are developed through consultation with relevant business units and approved by senior management.

Credit Monitoring and Remedial Management

The Bank regularly monitors credit exposures, portfolio performance and emerging risks that may impact its credit risk profile. The Board and senior management are updated on credit trends through internal risk reports, so that mitigating actions can be taken if necessary.

Delinquency Monitoring

The Bank monitors closely the delinquency of borrowing accounts as it is a key indicator of credit quality. An account is considered as delinquent when payment is not received on due date. Any delinquent accounts, including a revolving credit facility (such as an overdraft) with limit excesses, is closely monitored and managed through a disciplined process by officers from business units and risk management function. Where appropriate, such accounts are also subject to more frequent credit reviews.

5. CREDIT RISK (Cont'd.)

Classification and loan/ financing loss impairment

The Bank classifies its credit portfolios according to the borrower's ability to repay the credit facility from their normal source of income.

All borrowing accounts are categorised into 'Pass', 'Special Mention' or 'Non-Performing' categories. Non-Performing accounts are further categorised as 'Substandard', 'Doubtful' or 'Loss' in accordance with the Bank's Policy. Any account which is delinquent (or in excess for a revolving credit facility such as an overdraft) for more than 90 days will be categorised automatically as "Non-Performing". In addition, any account that exhibits weaknesses which is likely to jeopardise repayment on existing terms may be categorised as 'Non-Performing'.

Upgrading and declassification of a Non-Performing account to 'Pass' or 'Special Mention' status must be supported by a credit assessment of the repayment capability, cash flows and financial position of the borrower. The Bank must also be satisfied that once the account is declassified, the account is unlikely to be classified again in the near future.

A rescheduled or restructured account shall be categorised as Non-Performing when the account exhibits signs of increase in credit risk. The rescheduled or restructured account is to be placed on the appropriate classified grade based on the Bank's assessment of the financial condition of the borrower and the ability of the borrower to repay under the rescheduled or restructured terms. A rescheduled or restructured account must comply fully with the rescheduled or restructured terms before it can be declassified.

The Bank provides for impairment based on local regulatory requirements including Bank Negara Malaysia (BNM) guidelines and MFRS9 for local reporting purposes. Where necessary, additional impairment is provided for to comply with the Bank's impairment policy.

Special Asset Management

Special Asset Management (SAM) independently manages the restructuring, workout and recovery of the Bank's Non-Performing portfolios. The primary objectives are (i) to nurse the Non-Performing accounts back to financial health whenever possible for transfer back to the respective business units for management and (ii) to maximise recovery of the Non-Performing accounts that the Bank intends to exit.

Write-Off Policy

A classified account that is not secured by any realisable collateral will be written-off either when the prospect of a recovery is considered poor or when all feasible avenues of recovery have been exhausted.

5. CREDIT RISK (Cont'd.)

(i) The credit exposures by sector of the Bank for the financial year ended 31 December 2018 were as follows:

Bank	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
Agriculture, hunting, forestry and fishing	-	-	-	-	1,641,612	37,102	-	-	-	1,678,714
Mining and quarrying	-	-	758,580	-	135,415	6,776	-	-	-	900,771
Manufacturing	-	-	63,164	-	6,779,592	1,372,982	-	-	-	8,215,738
Electricity, gas and water	-	-	-	-	302,560	10,016	-	-	-	312,576
Construction	-	-	-	-	11,940,897	506,712	-	-	-	12,447,609
Wholesale, retail trade, restaurant and hotels	-	-	8,276	-	11,631,697	4,101,071	-	-	-	15,741,044
Transport, storage and communication	-	-	-	-	2,403,748	179,587	-	-	-	2,583,335
Finance, insurance and business services	7,380	58,654	13,358,418	130,244	3,026,406	724,482	-	-	-	17,305,584
Real estate	-	-	-	-	4,264,349	668,207	-	-	-	4,932,556
Community, social and personal services	-	-	-	-	93,696	110,702	-	-	-	204,398
Households	-	-	-	-	5,935	17,942,676	36,633,985	-	-	54,582,596
Others	13,063,612	-	-	-	96,484	471	-	114,445	1,028,776	14,303,788
	13,070,992	58,654	14,188,438	130,244	42,322,391	25,660,784	36,633,985	114,445	1,028,776	133,208,709

5. CREDIT RISK (Cont'd.)

(i) The credit exposures by sector of the Bank for the financial year ended 31 December 2017 were as follows:

Bank	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
Agriculture, hunting, forestry and fishing	-	-	-	-	1,251,124	44,859	-	-	-	1,295,983
Mining and quarrying	-	-	1,030,615	-	235,940	6,724	-	-	-	1,273,279
Manufacturing	-	-	66,200	-	6,184,011	1,324,791	-	-	-	7,575,002
Electricity, gas and water	-	-	-	-	215,335	9,000	-	-	-	224,335
Construction	-	-	-	-	12,774,324	457,015	-	-	-	13,231,339
Wholesale, retail trade, restaurant and hotels	-	-	7,548	-	8,191,329	3,965,350	-	-	-	12,164,227
Transport, storage and communication	-	-	-	-	1,464,826	180,796	-	-	-	1,645,622
Finance, insurance and business services	502	-	3,915,558	118,315	2,716,549	746,097	-	-	-	7,497,021
Real estate	-	-	-	-	4,007,600	740,936	-	-	-	4,748,536
Community, social and personal services	-	-	-	-	57,335	131,535	-	-	-	188,870
Households	-	-	-	-	-	18,002,833	35,026,181	-	-	53,029,014
Others	15,157,299	43,065	3,874,156	-	1,734,399	53	-	140,516	705,369	21,654,857
	<u>15,157,801</u>	<u>43,065</u>	<u>8,894,077</u>	<u>118,315</u>	<u>38,832,772</u>	<u>25,609,989</u>	<u>35,026,181</u>	<u>140,516</u>	<u>705,369</u>	<u>124,528,085</u>

5. CREDIT RISK (Cont'd.)

(i) The credit exposures by sector of the Islamic Banking Window for the financial year ended 31 December 2018 were as follows:

Islamic Banking Window	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
Agriculture, hunting, forestry and fishing	-	-	-	-	125,046	479	-	-	-	125,525
Manufacturing	-	-	-	-	150,585	63,769	-	-	-	214,354
Electricity, gas and water	-	-	-	-	63,304	-	-	-	-	63,304
Construction	-	-	-	-	189,106	34,403	-	-	-	223,509
Wholesale, retail trade, restaurant and hotels	-	-	-	-	230,487	182,957	-	-	-	413,444
Transport, storage and communication	-	-	-	-	7,171	26,064	-	-	-	33,235
Finance, insurance and business services	7,380	1,552	8,117	-	58,164	53,072	-	-	-	128,285
Real estate	-	-	-	-	108,012	33,508	-	-	-	141,520
Community, social and personal services	-	-	-	-	-	5,594	-	-	-	5,594
Households	-	-	-	-	-	323,180	1,694,078	-	-	2,017,258
Others	2,801,549	-	-	-	-	-	-	-	19,488	2,821,037
	<u>2,808,929</u>	<u>1,552</u>	<u>8,117</u>	<u>-</u>	<u>931,875</u>	<u>723,026</u>	<u>1,694,078</u>	<u>-</u>	<u>19,488</u>	<u>6,187,065</u>

5. CREDIT RISK (Cont'd.)

(i) The credit exposures by sector of the Islamic Banking Window for the financial year ended 31 December 2017 were as follows:

Islamic Banking Window	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
Manufacturing	-	-	-	-	35,651	32,411	-	-	-	68,062
Electricity, gas and water	-	-	-	-	54,631	-	-	-	-	54,631
Construction	-	-	-	-	39,682	13,890	-	-	-	53,572
Wholesale, retail trade, restaurant and hotels	-	-	-	-	61,824	91,914	-	-	-	153,738
Transport, storage and communication	-	-	-	-	10,023	15,861	-	-	-	25,884
Finance, insurance and business services	503	-	13,757	-	38,530	27,421	-	-	-	80,211
Real estate	-	-	-	-	46,276	18,172	-	-	-	64,448
Community, social and personal services	-	-	-	-	-	3,664	-	-	-	3,664
Households	-	-	-	-	-	254,170	493,184	-	-	747,354
Others	200,343	-	-	-	-	-	-	-	175	200,518
	200,846	-	13,757	-	286,617	457,503	493,184	-	175	1,452,082

5. CREDIT RISK (Cont'd.)

(ii) The credit exposures by remaining contractual maturities of the Bank for the financial year ended 31 December 2018 were as follows:

Bank	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates (including specialised lending and SMEs)	Retail	Residential mortgages	Equity exposures	Other assets	Grand total
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
< 3 months	3,290,858	30,472	12,038,829	63,778	11,560,508	810,168	15,887	-	125,263	27,935,763
3 - 6 months	56,531	11,396	853,765	9,957	2,642,987	197,071	9,895	-	-	3,781,602
6 - 12 months	476,927	16,786	160,053	23,409	2,770,679	7,341,955	1,606,411	-	-	12,396,220
1 - 3 years	4,026,435	-	729,488	31,821	12,368,152	2,591,426	116,353	114,445	903,513	20,881,633
3 - 5 years	2,668,818	-	388,509	1,279	7,426,579	556,756	258,361	-	-	11,300,302
> 5 years	2,551,423	-	17,794	-	5,553,486	14,163,408	34,627,078	-	-	56,913,189
	13,070,992	58,654	14,188,438	130,244	42,322,391	25,660,784	36,633,985	114,445	1,028,776	133,208,709

(ii) The credit exposures by remaining contractual maturities of the Bank for the financial year ended 31 December 2017 were as follows:

Bank	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates (including specialised lending and SMEs)	Retail	Residential mortgages	Equity exposures	Other assets	Grand total
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
< 3 months	7,914,599	12,931	6,717,045	57,535	10,111,185	764,419	17,199	-	29,949	25,624,862
3 - 6 months	3,044	4,566	62,399	9,597	2,369,214	170,483	3,657	-	-	2,622,960
6 - 12 months	141,831	25,568	235,353	17,375	3,131,426	7,290,201	1,572,148	-	882	12,414,784
1 - 3 years	4,400,891	-	1,502,388	28,214	10,311,276	2,507,064	102,075	140,516	674,538	19,666,962
3 - 5 years	2,139,792	-	351,733	5,485	7,422,383	438,258	269,360	-	-	10,627,011
> 5 years	557,644	-	25,159	109	5,487,288	14,439,564	33,061,742	-	-	53,571,506
	15,157,801	43,065	8,894,077	118,315	38,832,772	25,609,989	35,026,181	140,516	705,369	124,528,085

5. CREDIT RISK (Cont'd.)

(ii) The credit exposures by remaining contractual maturities of the Islamic Banking Window for the financial year ended 31 December 2018 were as follows:

Islamic Banking Window	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
< 3 months	2,712,854	1,552	-	-	299,285	100	-	-	-	3,013,791
3 - 6 months	30,195	-	-	-	10,215	-	-	-	-	40,410
6 - 12 months	-	-	-	-	25,025	-	-	-	-	25,025
1 - 3 years	65,880	-	8,117	-	107,269	326	-	-	19,488	201,080
3 - 5 years	-	-	-	-	130,259	2,013	88	-	-	132,360
> 5 years	-	-	-	-	359,822	720,587	1,693,990	-	-	2,774,399
	2,808,929	1,552	8,117	-	931,875	723,026	1,694,078	-	19,488	6,187,065

(ii) The credit exposures by remaining contractual maturities of the Islamic Banking Window for the financial year ended 31 December 2017 were as follows:

Islamic Banking Window	Sovereigns/ central banks RM'000	Public sector entities RM'000	Banks, DFIs and MDBs RM'000	Ins cos, securities firms and fund managers RM'000	Corporates (including specialised lending and SMEs) RM'000	Retail RM'000	Residential mortgages RM'000	Equity exposures RM'000	Other assets RM'000	Grand total RM'000
< 3 months	162,115	-	-	-	76,251	-	-	-	-	238,366
3 - 6 months	-	-	-	-	5,330	-	-	-	-	5,330
6 - 12 months	-	-	-	-	6,799	-	-	-	-	6,799
1 - 3 years	38,731	-	13,757	-	20,036	52	-	-	175	72,751
3 - 5 years	-	-	-	-	108,185	88	-	-	-	108,273
> 5 years	-	-	-	-	70,016	457,363	493,184	-	-	1,020,563
	200,846	-	13,757	-	286,617	457,503	493,184	-	175	1,452,082

5. CREDIT RISK (Cont'd.)

(iii) Past due and impaired loans analysed by industry:

	2018		2017	
	Past due but not impaired RM'000	Impaired loans RM'000	Past due but not impaired RM'000	Impaired loans RM'000
The Bank				
Agriculture, hunting, forestry and fishing	32,870	661	1,784	11,161
Mining and quarrying	1,666	-	2,013	-
Manufacturing	207,265	136,935	341,447	140,079
Electricity, gas and water	8,767	-	1,983	-
Construction	233,725	204,187	484,167	138,526
Wholesale, retail trade, restaurant and hotels	454,208	173,862	469,093	133,802
Transport, storage and communication	42,932	70,630	7,866	142,836
Finance, insurance and business services	41,815	23,531	35,406	127,092
Real estate	225,964	209,088	226,457	121,485
Community, social and personal services	1,273	541	2,721	737
Households:				
- purchase of residential properties	1,203,651	444,979	1,084,720	381,318
- purchase of non residential properties	431,627	79,010	376,784	60,201
- others	205,309	89,728	179,922	93,182
	3,091,072	1,433,152	3,214,363	1,350,419

5. CREDIT RISK (Cont'd.)

Past due and impaired loans analysed by industry for Islamic Banking Window:

	2018		2017	
	Past due but not impaired RM'000	Impaired loans RM'000	Past due but not impaired RM'000	Impaired loans RM'000
Islamic Banking Window				
Agriculture, hunting, forestry and fishing	-	-	-	-
Mining and quarrying	-	-	-	-
Manufacturing	8,559	-	-	-
Electricity, gas and water				
Construction	1,910	-	-	-
Wholesale, retail trade, restaurant and hotels	6,431	2,119	-	-
Transport, storage and communication	-	-	-	-
Finance, insurance and business services	1,579	-	-	-
Real estate	-	-	-	-
Community, social and personal services	-	-	-	-
Households:				
- purchase of residential properties	39,081	9,987	7,345	703
- purchase of non residential properties	2,215	498	-	-
- others	364	100	43	-
	60,139	12,704	7,388	703

5. CREDIT RISK (Cont'd.)

- (iv) Expected Credit Loss(ECL) 1,2 and 3 as well as individual and collective impairment provisions analysed by industry:

	2018		2017	
	ECL 3 RM'000	ECL1 and ECL2 RM'000	Individual impairment RM'000	Collective impairment RM'000
The Bank				
Agriculture, hunting, forestry and fishing	-	19,279	-	35,474
Mining and quarrying	-	8,241	-	2,814
Manufacturing	41,214	111,604	58,480	179,166
Electricity, gas and water	-	7,980	-	5,354
Construction	32,140	112,241	29,415	191,160
Wholesale, retail trade, restaurant and hotels	32,727	191,239	26,529	232,089
Transport, storage and communication	40,349	21,747	37,439	32,408
Finance, insurance and business services	9,859	59,755	106,999	77,893
Real estate	3,062	66,332	1,984	134,010
Community, social and personal services	-	3,346	13	2,989
Households:-				
- purchase of residential properties	31,841	382,733	27,549	169,557
- purchase of non residential properties	6,244	108,238	4,643	45,554
- others	15,238	68,101	17,092	120,389
	212,674	1,160,836	310,143	1,228,857

5. CREDIT RISK (Cont'd.)

Expected Credit Loss(ECL) 1,2 and 3 as well as individual and collective impairment provisions analysed by industry for Islamic Banking Window:

Islamic Banking Window	2018		2017	
	ECL 3 RM'000	ECL1 and ECL2 RM'000	Individual impairment RM'000	Collective impairment RM'000
Agriculture, hunting, forestry and fishing	-	57	-	-
Community, social and personal services	-	298	-	-
Manufacturing	-	5,094	-	1,088
Electricity, gas and water	-	1,232	-	-
Construction	-	1,957	-	1,999
Wholesale, retail trade, restaurants and hotels	348	12,560	-	2,881
Transport, storage and communication	-	1,779	-	263
Finance, insurance and business services	-	2,306	-	360
Real estate	-	3,740	-	956
Community, social and personal services	-	-	-	47
Households				
- purchase of residential properties	1,285	128	201	1,261
	1,633	29,151	201	8,855

5. CREDIT RISK (Cont'd.)

(v) Expected credit loss 3(ECL 3) allowances analysed by industry:

	2018		2017	
	ECL 3 allowances made during the year RM'000	Write-offs during the year RM'000	Individual impairment made during the year RM'000	Write-offs during the year RM'000
The Bank				
Agriculture, hunting, forestry and fishing	-	-	-	-
Mining and quarrying	-	-	-	-
Manufacturing	20,382	16,343	27,658	6,681
Electricity, gas and water	-	-	-	-
Construction	16,304	1,187	16,062	18,982
Wholesale, retail trade, restaurant and hotels	45,128	19,080	27,605	16,641
Transport, storage and communication	11,526	633	44,875	359
Finance, insurance and business services	10,019	100,475	70,801	4,815
Real estate	4,900	238	4,687	2,183
Community, social and personal services	168	160	18	10
Households:				
- purchase of residential properties	63,174	20,813	53,861	14,772
- purchase of non residential properties	7,967	2,426	5,512	1,644
- others	70,592	54,690	81,577	62,178
	250,160	216,045	332,656	128,265

5. CREDIT RISK (Cont'd.)

(v) Expected credit loss 3 allowances analysed by industry for Islamic Banking Window:

	2018		2017	
	ECL 3 allowances made during the year RM'000	Write-offs during the year RM'000	Individual impairment made during the year RM'000	Write-offs during the year RM'000
Islamic Banking Window				
Agriculture, hunting, forestry and fishing	-	-	-	-
Mining and quarrying	-	-	-	-
Manufacturing	-	-	-	-
Electricity, gas and water	-	-	-	-
Construction	-	-	-	-
Wholesale, retail trade, restaurant and hotels	394	-	-	-
Transport, storage and communication	-	-	-	-
Finance, insurance and business services	-	-	-	-
Real estate	-	-	-	-
Community, social and personal services	-	-	-	-
Households:				
- purchase of residential properties	1,776	-	204	-
- purchase of non residential properties	-	-	-	-
- others	9	-	-	-
	2,179	-	204	-

Impaired loans and impairment provision by geographical area

Past due loans, impaired loans and impairment provision were from customers residing in Malaysia.

5. CREDIT RISK (Cont'd.)

(vii) Geographical Analysis for the Bank:

As at 31 December 2018	In Malaysia RM'000	Outside Malaysia RM'000	Total RM'000
Cash and short-term funds	3,566,870	357,845	3,924,715
Securities purchased under resale agreements	4,603,059	-	4,603,059
Deposits and placements with financial institutions	800,000	-	800,000
Financial assets at fair value through profit or loss (FVTPL)	1,811,633	-	1,811,633
Debt instruments at fair value through other comprehensive income (FVOCI)	16,080,616	-	16,080,616
Equity instruments at fair value through other comprehensive income (FVOCI)	114,445	-	114,445
Loans, advances and financing	74,997,835	7,036,840	82,034,675
Derivative financial assets	311,462	65,034	376,496
Other assets	616,890	35,209	652,099
Statutory deposits with BNM	2,016,869	-	2,016,869
Financial assets not subject to credit risk	568,107	-	568,107
	105,487,786	7,494,928	112,982,714
Commitments and contingencies	91,053,870	10,534,500	101,588,370

As at 31 December 2017	In Malaysia RM'000	Outside Malaysia RM'000	Total RM'000
Cash and short-term funds	7,970,457	468,459	8,438,916
Securities purchased under resale agreements	1,079,420	-	1,079,420
Deposits and placements with financial institutions	150,000	-	150,000
Financial assets at fair value through profit or loss (FVTPL)	229,455	-	229,455
Available-for-sale securities (AFS)	11,009,527	-	11,009,527
Loans, advances and financing	70,394,265	7,280,765	77,675,030
Derivative financial assets	511,835	80,325	592,160
Other assets	314,853	10,538	325,391
Statutory deposits with BNM	1,802,204	-	1,802,204
Financial assets not subject to credit risk	685,854	-	685,854
	94,147,870	7,840,087	101,987,957
Commitments and contingencies	86,590,471	10,519,679	97,110,150

5. CREDIT RISK (Cont'd.)

Credit Exposures under Basel II

Under Basel II, credit risk for the various asset classes may be computed using a combination of:

- i. Standardised Approach (SA);
- ii. Foundation Internal Ratings-Based (FIRB) Approach; and
- iii. Advanced Internal Ratings-Based (AIRB) Approach.

The table below summarises the approaches adopted by the Bank for credit risk computation.

The Bank has adopted the FIRB Approach for its non-retail exposures and the AIRB Approach for its retail exposures.

	Standardised* <u>RM'million</u>	FIRB <u>RM'million</u>	AIRB <u>RM'million</u>
Total Credit Exposures	14,680	47,766	62,372

*Amount under Standardised Approach refers to credit exposures where IRB Approach is not applicable.

The Bank had on 7 January 2010 received approval from BNM to migrate directly to the Internal Ratings Based Approach for credit risk beginning January 2010 as per the Risk Weighted Capital Adequacy Framework.

For exposures subject to the SA, approved External Credit Assessment Institutions (ECAI) ratings and prescribed risk weights based on asset class are used in the computation of regulatory capital.

The ECAI used by the Bank are Rating Agency Malaysia, Fitch Ratings, Moody's Investors Service, Malaysian Rating Corporation Berhad and Standard & Poor's. ECAI ratings are mapped to a common credit quality grade prescribed by BNM.

5. CREDIT RISK (Cont'd.)

The aggregate breakdown of credit risk standardised exposures by risk weights of the Bank for the financial year ended 31 December 2018 were as follows:

Risk weights	Bank								Total RWA
	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates	Other assets	Equity	Total exposures after netting and CRM	
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
0%	13,036,857	-	-	-	1,174	248,540	-	13,286,571	-
10%	-	-	-	-	-	-	-	-	-
20%	34,135	58,654	-	-	-	-	-	92,789	18,558
35%	-	-	-	-	-	-	-	-	-
50%	-	-	-	-	1	-	-	1	1
75%	-	-	-	-	-	-	-	-	-
90%	-	-	-	-	-	-	-	-	-
100%	-	-	-	31,089	374,322	780,236	112,489	1,298,136	1,298,136
110%	-	-	-	-	-	-	-	-	-
125%	-	-	-	-	-	-	-	-	-
135%	-	-	-	-	-	-	-	-	-
150%	-	-	-	-	2,451	-	-	2,451	3,676
270%	-	-	-	-	-	-	-	-	-
350%	-	-	-	-	-	-	-	-	-
400%	-	-	-	-	-	-	-	-	-
625%	-	-	-	-	-	-	-	-	-
937.5%	-	-	-	-	-	-	-	-	-
1250.0%	-	-	-	-	-	-	-	-	-
Total	13,070,992	58,654	-	31,089	377,948	1,028,776	112,489	14,679,948	1,320,371

5. CREDIT RISK (Cont'd.)

The aggregate breakdown of credit risk standardised exposures by risk weights of the Bank for the financial year ended 31 December 2017 were as follows:

Risk weights	Bank								Total RWA
	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates	Other assets	Equity	Total exposures after netting and CRM	
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
0%	15,136,493	-	-	-	1,170	122,413	-	15,260,076	-
10%	-	-	-	-	-	-	-	-	-
20%	21,308	43,065	15,431	-	-	-	-	79,804	15,960
35%	-	-	-	-	-	-	-	-	-
50%	-	-	28,387	-	1	-	-	28,388	14,194
75%	-	-	-	-	-	-	-	-	-
90%	-	-	-	-	-	-	-	-	-
100%	-	-	-	95,857	912,579	582,956	-	1,591,392	1,591,393
110%	-	-	-	-	-	-	-	-	-
125%	-	-	-	-	-	-	-	-	-
135%	-	-	-	-	-	-	-	-	-
150%	-	-	-	-	10,742	-	-	10,742	16,112
270%	-	-	-	-	-	-	-	-	-
350%	-	-	-	-	-	-	-	-	-
400%	-	-	-	-	-	-	-	-	-
625%	-	-	-	-	-	-	-	-	-
937.5%	-	-	-	-	-	-	-	-	-
1250.0%	-	-	-	-	-	-	-	-	-
Total	15,157,801	43,065	43,818	95,857	924,492	705,369	-	16,970,402	1,637,659

5. CREDIT RISK (Cont'd.)

Credit Exposures under Basel II (cont'd.)

The table below summarises the approaches adopted by the Bank for credit risk computation.

The Bank has adopted the FIRB Approach for its non-retail exposures and the AIRB Approach for its retail exposures under its Islamic Banking Window:

	Standardised* <u>RM'million</u>	FIRB <u>RM'million</u>	AIRB <u>RM'million</u>
Total Credit Exposures	2,830	920	2,417

*Amount under Standardized Approach refers to credit exposures where IRB Approach is not applicable.

5. CREDIT RISK (Cont'd.)

The aggregate breakdown of credit risk standardised exposures by risk weights of the Islamic Banking Window for the financial year ended 31 December 2018 were as follows:

Risk weights	Islamic Banking Window							
	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates	Other assets	Total exposures after netting and CRM	Total RWA
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
0%	2,808,929	-	-	-	-	-	2,808,929	-
10%	-	-	-	-	-	-	-	-
20%	-	1,552	-	-	-	-	1,552	311
35%	-	-	-	-	-	-	-	-
50%	-	-	-	-	-	-	-	-
75%	-	-	-	-	-	-	-	-
90%	-	-	-	-	-	-	-	-
100%	-	-	-	-	-	19,488	19,488	19,488
110%	-	-	-	-	-	-	-	-
125%	-	-	-	-	-	-	-	-
135%	-	-	-	-	-	-	-	-
150%	-	-	-	-	-	-	-	-
270%	-	-	-	-	-	-	-	-
350%	-	-	-	-	-	-	-	-
400%	-	-	-	-	-	-	-	-
625%	-	-	-	-	-	-	-	-
937.5%	-	-	-	-	-	-	-	-
1250.0%	-	-	-	-	-	-	-	-
Total	2,808,929	1,552	-	-	-	19,488	2,829,969	19,799

5. CREDIT RISK (Cont'd.)

The aggregate breakdown of credit risk standardised exposures by risk weights of the Islamic Banking Window for the financial year ended 31 December 2017 were as follows:

Risk weights	Islamic Banking Window							
	Sovereigns/ central banks	Public sector entities	Banks, DFIs and MDBs	Ins cos, securities firms and fund managers	Corporates	Other assets	Total exposures after netting and CRM	Total RWA
	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000	RM'000
0%	200,846	-	-	-	-	-	200,846	-
10%	-	-	-	-	-	-	-	-
20%	-	-	-	-	-	-	-	-
35%	-	-	-	-	-	-	-	-
50%	-	-	-	-	-	-	-	-
75%	-	-	-	-	-	-	-	-
90%	-	-	-	-	-	-	-	-
100%	-	-	-	-	-	175	175	175
110%	-	-	-	-	-	-	-	-
125%	-	-	-	-	-	-	-	-
135%	-	-	-	-	-	-	-	-
150%	-	-	-	-	-	-	-	-
270%	-	-	-	-	-	-	-	-
350%	-	-	-	-	-	-	-	-
400%	-	-	-	-	-	-	-	-
625%	-	-	-	-	-	-	-	-
937.5%	-	-	-	-	-	-	-	-
1250.0%	-	-	-	-	-	-	-	-
Total	200,846	-	-	-	-	175	201,021	175

5. CREDIT RISK (Cont'd.)

Rated Exposures according to ratings by ECAIs of the Bank as at 31 December 2018 were as follows:

RM'000						
Exposure class	Ratings of Corporates by Approved ECAIs					
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
	Fitch	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 (applicable for entities risk weighted based on their external ratings as corporates)		-	-	-	-	58,654
Insurance cos, securities firms and fund managers		-	-	-	-	31,089
Corporates		-	-	-	-	377,948
Total		-	-	-	-	467,692

RM'000							
Exposure class	Ratings of Banking Institutions by Approved ECAIs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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, DFIs and MDBs		-	-	-	-	-	-
Total		-	-	-	-	-	-

RM'000							
Exposure class	Ratings of Sovereigns and Central Banks by Approved ECAIs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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							
Sovereigns/central banks		-	13,070,992	-	-	-	-
Total		-	13,070,992	-	-	-	-

5. CREDIT RISK (Cont'd.)

Rated Exposures according to ratings by ECAs of the Bank for the financial year ended 31 December 2017 were as follows:

RM'000						
Exposure class	Ratings of Corporates by Approved ECAs					
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
	Fitch	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 (applicable for entities risk weighted based on their external ratings as corporates)		-	-	-	-	43,065
Insurance cos, securities firms and fund managers		-	-	-	-	95,857
Corporates		-	-	-	-	924,492
Total		-	-	-	-	1,063,414

RM'000							
Exposure class	Ratings of Banking Institutions by Approved ECAs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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, DFIs and MDBs		14,000	24,262	37	-	-	5,519
Total		14,000	24,262	37	-	-	5,519

RM'000							
Exposure class	Ratings of Sovereigns and Central Banks by Approved ECAs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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							
Sovereigns/central banks		-	15,157,801	-	-	-	-
Total		-	15,157,801	-	-	-	-

5. CREDIT RISK (Cont'd.)

Rated Exposures according to ratings by ECAs of the Islamic Banking Window as at 31 December 2018 were as follows:

RM'000

Exposure class	Ratings of Corporates by Approved ECAs					
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
	Fitch	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 (applicable for entities risk weighted based on their external ratings as corporates)		-	-	-	-	1,552
Insurance cos, securities firms and fund managers		-	-	-	-	-
Corporates		-	-	-	-	-
Total		-	-	-	-	1,552

RM'000

Exposure class	Ratings of Banking Institutions by Approved ECAs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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
<u>On and off-balance sheet exposures</u>							
Banks, DFIs and MDBs		-	-	-	-	-	-
Total		-	-	-	-	-	

RM'000

Exposure class	Ratings of Sovereigns and Central Banks by Approved ECAls						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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
<u>On and off-balance sheet exposures</u>							
Sovereigns/ central banks		-	2,808,929	-	-	-	-
Total		-	2,808,929	-	-	-	-

5. CREDIT RISK (Cont'd.)

Rated Exposures according to ratings by ECAIs of the Islamic Banking Window for the financial year ended 31 December 2017 were as follows:

RM'000

Exposure class	Ratings of Corporates by Approved ECAIs					
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Ba3	B1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BB-	B+ to D	Unrated
	Fitch	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 (applicable for entities risk weighted based on their external ratings as corporates)		-	-	-	-	-
Insurance cos, securities firms and fund managers		-	-	-	-	-
Corporates		-	-	-	-	-
Total		-	-	-	-	-

RM'000

Exposure class	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	AAA to AA3	A1 to A3	BBB1 to BBB3	BB1 to B3	C1 to D	Unrated
	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	C+ to D	Unrated
On and off-balance sheet exposures						
Banks, DFIs and MDBs	-	-	-	-	-	-
Total	-	-	-	-	-	-

RM'000

Exposure class	Ratings of Sovereigns and Central Banks by Approved ECAIs						
	Moody's	Aaa to Aa3	A1 to A3	Baa1 to Baa3	Ba1 to B3	Caa1 to C	Unrated
	S&P	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	CCC+ to D	Unrated
	Fitch	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
<u>On and off-balance sheet exposures</u>							
Sovereigns/central banks		-	200,846	-	-	-	-
Total		-	200,846	-	-	-	

5. CREDIT RISK (Cont'd.)

Internal Credit Rating System

The Bank employs internal rating models to support the assessment of credit risk and assignment of exposures to rating grades or pools. Internal ratings are used pervasively by the Bank in the areas of credit approval, credit review and monitoring, credit stress testing, limits setting, pricing and collections.

The Bank has established a credit rating governance framework to ensure the reliable and consistent performance of the Bank's rating systems. The framework defines the roles and responsibilities of the various parties in the credit rating process, including independent model performance monitoring, annual model validation and independent reviews by Internal Audit.

Credit risk models are independently validated before they are implemented to ensure they are fit for purpose. The robustness of these rating models is monitored on an ongoing basis, and all models are subject to annual reviews conducted by model owners to ascertain that the chosen risk factors and assumptions continue to remain relevant for the respective portfolios. All new models, model changes and annual reviews are approved by the EXCO or Board, depending on the materiality of the portfolio.

Non-Retail Exposures

The Bank has adopted the FIRB Approach for its non-retail exposures. Under this approach, the probability of default (PD) for each borrower is estimated using internal models. These PD models employ qualitative and quantitative factors to provide an assessment of the borrower's ability to meet their financial obligations, and are calibrated to provide an estimate of the likelihood of default over one-year time horizon. A default is considered to have occurred if:

- the obligor is unlikely to pay its credit obligations in full to the Bank, without recourse by the Bank to actions such as realising the security; or
- the obligor is past due for more than 90 days on any credit obligation to the Bank.

Supervisory loss given default (LGD) and exposure at default (EAD) parameters prescribed by the BNM are used together with the internal credit ratings to calculate risk weights and regulatory capital requirements.

While the Bank's internal risk rating grades may show some correlation with the rating grades of external credit assessment institutions (ECAIs), they are not directly comparable or equivalent to the ECAIs ratings.

5. CREDIT RISK (Cont'd.)

Corporate Portfolio

The Bank has developed models to rate exposures in the Non-bank Financial Institution (NBFI), Large Corporate and SME portfolios. Credit risk factors used to derive a borrower's risk rating include its financial strength, quality of management, business risks, and the industry in which it operates. The borrower risk rating process is augmented by facility risk ratings, which take into account the type and structure of the facility, availability and type of collateral, and seniority of the exposure.

The Bank's internal rating grade structure for the NBFI, Large Corporate and SME models consists of 16 pass grades. The models are mapped to the rating scale by calibration that takes into account the Bank's long-term average portfolio default rate.

Specialised Lending Portfolio

The Bank has developed models for four Specialised Lending portfolios, namely: Income Producing Real Estate (IPRE), Commodities Finance (CF), Project Finance (PF) and Ship Finance (SF). Internal risk grades are derived based on a comprehensive assessment of financial and non-financial risk factors using internal scorecards.

The rating grade structure for IPRE portfolios follows that of the corporate asset class, with 16 pass grades. Risk grades derived for CF, PF and SF portfolios are mapped to four supervisory slotting categories, which determines the risk weights to be applied to such exposures.

Bank Portfolio

The Bank's internal scorecard takes into account asset quality, capital adequacy, liquidity, management, regulatory environment and robustness of the overall banking system. The scorecard has an internal rating grade structure consisting of 15 pass grades.

Equity Portfolio

The Bank adopts the following approaches for its equity investments:

- i. Simple Risk Weight (SRW) method for its equity investment portfolio; and
- ii. PD/LGD method for its investments in Tier-1 and Tier-2 perpetual securities issued by banks.

Investment exposures adopting the SRW method are subject to the supervisory risk weights, while investment exposures adopting the PD/LGD method are rated using the Bank's internal scorecard.

5. CREDIT RISK (Cont'd.)

Retail Exposures

The Bank has adopted the AIRB Approach for its retail exposures, which comprises residential mortgages, qualifying revolving retail exposures and other retail exposures.

Exposures within each of these asset classes are not managed individually, but as part of a pool of similar exposures based on borrower and transaction characteristics. Internal risk segmentation models are used to estimate PD, LGD and EAD parameters for each of these exposure pools based on historical internal loss data. Where internal loss data are insufficient to provide robust risk estimates, the segmentation models may incorporate internal and/or external proxies and, where necessary, may be augmented with appropriate margins of conservatism.

Retail Probability of Default Models

Retail PD models are based on pools of homogeneous exposures segmented by a combination of application scores, behavioral scores and other risk drivers reflecting borrower, facility and delinquency characteristics. PD pools are calibrated through-the-cycle using at least five years of historical data that cover a full economic cycle. For low default portfolios, internal and/or external proxies that are highly correlated with internal defaults are used to estimate the long-run average PD. A regulatory floor of 0.03 per cent is applied to all PD pools.

In general, the long-run observed default rates are largely lower than the PD estimates due to the model's calibration philosophy and the application of conservative overlays to account for model risk.

Retail Loss Given Default Models

Retail LGDs are estimated directly using historical default and recovery data via the 'workout' approach, which considers the economic losses arising from different post-default scenarios such as cured, restructured and liquidated. LGD models are segmented using material pre-default risk drivers such as facility and collateral characteristics.

LGD models are calibrated to reflect a portfolio's economic downturn experience. In addition, for residential mortgages, an LGD floor of 10 per cent is applied at the segment level.

Retail Exposure at Default Models

For revolving products, EAD is computed based on the current outstanding balance and the estimated potential drawdown of undrawn commitments, which is statistically determined based on historical data. For closed-end products, the EAD is the current outstanding balance. EAD models are generally segmented by material pre-default risk drivers such as facility type, limit and utilisation. EAD models are calibrated to reflect the portfolio long-run averages, except for portfolios that exhibit positive correlation between LGD and PD values, in which case, these portfolios' EAD models are calibrated to reflect their economic downturn conditions. EADs must be at least equal to the current outstanding balances.

5. CREDIT RISK (Cont'd.)

Credit Risk Profile

The following tables presented the breakdown of exposures by RWA and EAD using the respective internal rating scale for the model applicable to the asset classes for the financial year ended 31 December:-

Exposures under the IRB approach by Risk Grade

2018

Bank

CRR band	1-9	10-16	17-20 (Default)
	RM'000	RM'000	RM'000
<u>Non-retail exposures (EAD)</u>			
Large corporate, SMEs and specialised lending (IPRE)	24,475,227	16,628,011	798,923
Bank	13,363,922	824,516	-
Total non-retail exposures	37,839,149	17,452,527	798,923
<u>Undrawn commitments</u>			
Large corporate, SMEs and specialised lending (IPRE)	1,930,295	1,753,562	21,579
Bank	-	-	-
Total undrawn commitments	1,930,295	1,753,562	21,579
<u>Exposure weighted average LGD (%)</u>			
Large corporate, SMEs and specialised lending (IPRE)	43%	39%	44%
Bank	34%	45%	-
<u>Exposure weighted average risk weight</u>			
Large corporate, SMEs and specialised lending (IPRE)	71%	117%	2%
Bank	10%	40%	-

Specialised Lending Exposure under the Supervisory Slotting Criteria

Supervisory Categories / Risk Weights	Strong/ 70%	Good/ 90%	Satisfactory/ 115%	Weak/ 250%	Default/ 0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Specialised Lending Exposure (EAD)</u>					
Project Finance	33,281	-	-	-	-
Object Finance	563	5,015	-	-	-
Risk Weighted Assets	23,691	4,514	-	-	-

5. CREDIT RISK (Cont'd.)

Exposures under the IRB approach by Risk Grade (cont'd.)

2018

Bank

PD range of retail exposures	0.00% to 1.00%	1.01% to 2.00%	2.01% to 99.99%	SD to default
	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>				
Residential mortgages	31,913,946	1,087,154	3,135,750	497,136
Qualifying revolving retail	4,241,809	760,733	1,744,008	38,737
Other retail	14,371,263	2,126,114	2,190,704	187,415
Total retail exposures	50,527,018	3,974,001	7,070,462	723,288
<u>Undrawn commitments</u>				
Residential mortgages	2,212,750	291,969	160,681	-
Qualifying revolving retail	3,126,817	328,075	587,096	-
Other retail	2,020,913	574,904	283,180	328
Total undrawn commitments	7,360,480	1,194,948	1,030,957	328
<u>Exposure weighted average LGD (%)</u>				
Residential mortgages	12.17%	14.16%	12.62%	12.68%
Qualifying revolving retail	31.99%	45.02%	45.09%	56.19%
Other retail	16.20%	26.51%	26.43%	24.35%
<u>Exposure weighted average risk weight</u>				
Residential mortgages	6.92%	21.94%	42.30%	80.57%
Qualifying revolving retail	5.99%	19.66%	65.86%	353.30%
Other retail	12.06%	28.95%	40.91%	131.67%

5. CREDIT RISK (Cont'd.)

Exposures under the IRB approach by Risk Grade (cont'd.)

2017

Bank

CRR band	1-9	10-16	17-20 (Default)
	RM'000	RM'000	RM'000
<u>Non-retail exposures (EAD)</u>			
Large corporate, SMEs and specialised lending (IPRE)	22,669,812	14,461,704	761,842
Bank	8,668,711	181,546	-
Total non-retail exposures	31,338,523	14,643,250	761,842
<u>Undrawn commitments</u>			
Large corporate, SMEs and specialised lending (IPRE)	3,025,565	537,391	12,210
Bank	-	-	-
Total undrawn commitments	3,025,565	537,391	12,210
<u>Exposure weighted average LGD (%)</u>			
Large corporate, SMEs and specialised lending (IPRE)	42%	38%	44%
Bank	41%	45%	-
<u>Exposure weighted average risk weight</u>			
Large corporate, SMEs and specialised lending (IPRE)	73%	114%	-
Bank	13%	42%	-

5. CREDIT RISK (Cont'd.)

Specialised Lending Exposure under the Supervisory Slotting Criteria

Supervisory Categories / Risk Weights	Strong/ 70%	Good/ 90%	Satisfactory/ 115%	Weak/ 250%	Default/ 0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Specialised Lending Exposure (EAD)</u>					
Object Finance	814	6,212	-	4,923	-
Risk Weighted Assets	570	5,590	-	12,306	-

PD range of retail exposures	0.00% to 1.00%	1.01% to 2.00%	2.01% to 99.99%	SD to default
	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>				
Residential mortgages	30,497,208	1,151,241	2,946,605	431,127
Qualifying revolving retail	4,351,731	672,789	1,741,084	44,997
Other retail	14,431,770	2,121,589	2,064,468	181,561
Total retail exposures	49,280,709	3,945,619	6,752,157	657,685
<u>Undrawn commitments</u>				
Residential mortgages	2,294,613	360,681	179,333	-
Qualifying revolving retail	3,247,451	299,049	701,731	-
Other retail	2,003,834	569,823	248,100	1,062
Total undrawn commitments	7,545,898	1,229,553	1,129,164	1,062
<u>Exposure weighted average LGD (%)</u>				
Residential mortgages	11.87%	13.97%	12.41%	12.31%
Qualifying revolving retail	31.81%	45.21%	42.77%	55.80%
Other retail	15.98%	25.95%	26.75%	25.29%
<u>Exposure weighted average risk weight</u>				
Residential mortgages	6.75%	21.66%	41.91%	74.56%
Qualifying revolving retail	5.99%	19.91%	62.03%	316.12%
Other retail	11.97%	29.33%	42.54%	152.89%

5. CREDIT RISK (Cont'd.)

Exposures under the IRB approach by Risk Grade (cont'd.)

2018

Islamic Bank Window

CRR band	1-9	10-16	17-20 (Default)
	RM'000	RM'000	RM'000
<u>Non-retail exposures (EAD)</u>			
Large corporate, SMEs and specialised lending (IPRE)	605,507	326,368	-
Bank	8,117	-	-
Total non-retail exposures	613,624	326,368	-
<u>Undrawn commitments</u>			
Large corporate, SMEs and specialised lending (IPRE)	10,612	13,141	-
Bank	-	-	-
Total undrawn commitments	10,612	13,141	-
<u>Exposure weighted average LGD (%)</u>			
Large corporate, SMEs and specialised lending (IPRE)	44%	44%	-
Bank	45%	-	-
<u>Exposure weighted average risk weight</u>			
Large corporate, SMEs and specialised lending (IPRE)	85%	111%	-
Bank	10%	-	-

As at 31 December 2018, there were no Specialised Lending Exposure under the Supervisory Slotting Criteria for Islamic Banking Window.

PD range of retail exposures	0.00% to 1.00%	1.01% to 2.00%	2.01% to 99.99%	SD to default
	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>				
Residential mortgages	1,296,441	245,383	142,175	10,080
Other retail	356,351	279,317	84,742	2,617
Total retail exposures	1,652,791	524,699	226,917	12,697
<u>Undrawn commitments</u>				
Residential mortgages	267,182	68,623	13,717	-
Other retail	86,916	106,880	15,858	-
Total undrawn commitments	354,098	175,504	29,575	-
<u>Exposure weighted average LGD (%)</u>				
Residential mortgages	15.45%	15.44%	16.79%	15.69%
Other retail	20.29%	23.31%	26.59%	32.31%
<u>Exposure weighted average risk weight</u>				
Residential mortgages	10.18%	23.70%	50.48%	29.43%
Other retail	15.95%	26.21%	39.51%	223.88%

5. CREDIT RISK (Cont'd.)

Exposures under the IRB approach by Risk Grade (cont'd.)

2017

Islamic Bank Window

CRR band	1-9	10-16	17-20 (Default)
	RM'000	RM'000	RM'000
<u>Non-retail exposures (EAD)</u>			
Large corporate, SMEs and specialised lending (IPRE)	91,680	194,938	-
Bank	13,757	-	-
Total non-retail exposures	105,437	194,938	-
<u>Undrawn commitments</u>			
Large corporate, SMEs and specialised lending (IPRE)	7,500	51,950	-
Bank	-	-	-
Total undrawn commitments	7,500	51,950	-
<u>Exposure weighted average LGD (%)</u>			
Large corporate, SMEs and specialised lending (IPRE)	45%	45%	-
Bank	45%	-	-
<u>Exposure weighted average risk weight (%)</u>			
Large corporate, SMEs and specialised lending (IPRE)	62%	144%	-
Bank	9%	-	-

PD range of retail exposures	0.00% to 1.00%	1.01% to 2.00%	2.01% to 99.99%	SD to default
	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>				
Residential mortgages	129,319	323,896	39,266	703
Other retail	125,531	271,943	60,029	-
Total retail exposures	254,850	595,839	99,295	703
<u>Undrawn commitments</u>				
Residential mortgages	34,544	94,142	9,345	-
Other retail	13,840	145,380	15,693	-
Total undrawn commitments	48,384	239,522	25,038	-
<u>Exposure weighted average LGD (%)</u>				
Residential mortgages	15.31%	15.36%	16.99%	15.58%
Other retail	27.82%	17.21%	25.24%	-
<u>Exposure weighted average risk weight</u>				
Residential mortgages	10.10%	23.65%	46.59%	0.63%
Other retail	22.45%	19.87%	34.98%	-

5. CREDIT RISK (Cont'd.)

Retail exposures under the IRB approach by expected loss range as at 31 December 2018 were as follows:

Bank

EL% range of retail exposures	0.0% to 1.0%	1.0% to 5.0%	5.0% to 10.0%	10.0% to 30.0%	30.0% to 100.0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>					
Residential mortgages	35,471,348	880,748	69,560	212,329	-
Qualifying revolving retail	5,062,787	1,220,837	214,840	213,146	73,677
Other retail	17,547,085	1,047,738	199,321	43,205	38,148
Total retail exposures	58,081,220	3,149,322	483,722	468,680	111,825
<u>Undrawn commitments</u>					
Residential mortgages	2,651,618	12,435	1,347	-	-
Qualifying revolving retail	3,511,836	464,725	39,867	23,561	1,999
Other retail	2,777,247	98,642	2,187	1,175	74
Total undrawn commitments	8,940,701	575,802	43,401	24,736	2,073
<u>Exposure weighted average risk weight (%)</u>					
Residential mortgages	9.81%	65.32%	81.89%	29.47%	-
Qualifying revolving retail	7.64%	47.45%	112.85%	165.36%	174.02%
Other retail	14.89%	56.94%	96.04%	180.23%	35.81%

Retail exposures under the IRB approach by expected loss range for the financial year ended 31 December 2017 were as follows:

Bank

EL% range of retail exposures	0.0% to 1.0%	1.0% to 5.0%	5.0% to 10.0%	10.0% to 30.0%	30.0% to 100.0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>					
Residential mortgages	33,935,786	898,003	38,230	154,085	77
Qualifying revolving retail	5,076,868	1,287,548	166,060	208,483	71,642
Other retail	17,529,204	969,888	230,091	42,649	27,556
Total retail exposures	56,541,858	3,155,439	434,381	405,217	99,275
<u>Undrawn commitments</u>					
Residential mortgages	2,786,752	46,303	1,572	-	-
Qualifying revolving retail	3,596,071	607,149	14,626	28,452	1,933
Other retail	2,699,466	113,788	5,303	4,188	74
Total undrawn commitments	9,082,289	767,240	21,501	32,640	2,007
<u>Exposure weighted average risk weight (%)</u>					
Residential mortgages	9.53%	66.31%	89.55%	0.80%	-
Qualifying revolving retail	7.43%	46.12%	111.96%	161.79%	171.07%
Other retail	15.01%	51.28%	127.91%	190.36%	9.96%

5. CREDIT RISK (Cont'd.)

Retail exposures under the IRB approach by expected loss range as at 31 December 2018 were as follows:

Islamic Banking Window

EL% range of retail exposures	0.0% to 1.0%	1.0% to 5.0%	5.0% to 10.0%	10.0% to 30.0%	30.0% to 100.0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>					
Residential mortgages	1,669,857	10,403	3,838	9,980	-
Other retail	692,020	22,455	4,854	3,696	-
Total retail exposures	2,361,878	32,859	8,692	13,676	-
<u>Undrawn commitments</u>					
Residential mortgages	349,522	-	-	-	-
Other retail	206,573	3,082	-	-	-
Total undrawn commitments	556,094	3,082	-	-	-
<u>Exposure weighted average risk weight (%)</u>					
Residential mortgages	15.00%	77.43%	89.10%	29.00%	-
Other retail	21.12%	56.75%	68.22%	194.49%	-

Retail exposures under the IRB approach by expected loss range for the financial year ended 31 December 2017 were as follows:

Islamic Banking Window

EL% range of retail exposures	0.0% to 1.0%	1.0% to 5.0%	5.0% to 10.0%	10.0% to 30.0%	30.0% to 100.0%
	RM'000	RM'000	RM'000	RM'000	RM'000
<u>Retail exposures (EAD)</u>					
Residential mortgages	492,481	-	-	703	-
Other retail	446,310	11,193	-	-	-
Total retail exposures	938,791	11,193	-	703	-
<u>Undrawn commitments</u>					
Residential mortgages	138,031	-	-	-	-
Other retail	174,913	-	-	-	-
Total undrawn commitments	312,944	-	-	-	-
<u>Exposure weighted average risk weight (%)</u>					
Residential mortgages	21.92%	-	-	0.63%	-
Other retail	21.72%	56.15%	-	-	-

5. CREDIT RISK (Cont'd.)

Actual Loss by Asset Class

Actual loss consists of impairment loss allowance and write-off to the Bank's income statement for the financial year ended 31 December 2018.

Comparison of actual loss and expected loss by asset class

Bank

Asset class	Actual loss (as at 31 December 2018)	Expected loss (as at 31 December 2017)	Actual loss (as at 31 December 2017)	Expected loss (as at 31 December 2016)
	RM'000	RM'000	RM'000	RM'000
Corporate	22,159	433,229	115,974	436,092
Bank	-	3,211	-	4,946
Retail	77,891	206,388	68,266	194,271
Total	100,050	642,828	184,240	635,309

The actual loss in 2018 is lower than the expected loss computed as at 31 December 2017. The Bank continues to be proactive in its risk management approach to ensure that actual losses remained within Bank's expectations.

EL is the estimated credit loss from defaults over a one-year horizon. EL is the product of PD, LGD and EAD. A comparison of actual loss and expected loss provides an indication of the predictive power of the IRB models used by the Bank.

However, they are not directly comparable due to the following reasons:

- EL as at 31 December 2017 is a measure of expected credit loss based on the credit exposure as at that date. On the other hand, impairment loss allowance and write-offs are accounting entries relating to a fluctuating portfolio over the course of the financial year. Moreover, write-offs may relate to defaults from prior years.
- EL is estimated based on non-default exposures only, while impairment loss allowance is an accounting estimate of likely loss from defaulted exposures. Write-offs are recorded on defaulted exposures when no further recovery is possible.

Islamic Banking Window

Asset class	Actual loss (as at 31 December 2018)	Expected loss (as at 31 December 2017)	Actual loss (as at 31 December 2017)	Expected loss (as at 31 December 2016)
	RM'000	RM'000	RM'000	RM'000
Corporate	-	5,063	-	522
Bank	-	6	-	-
Retail	1,583	2,351	204	37
Total	1,583	7,420	204	559

5. CREDIT RISK (Cont'd.)

Actual loss consists of impairment loss allowance and write-off to the Bank's income statement for the financial year ended 31 December 2018.

Bank	Stage 1 12 Months ECL RM'000	Stage 2 Lifetime ECL non credit- impaired RM'000	Stage 3 Lifetime ECL credit- impaired RM'000	Total ECL RM'000
At 1 January 2018				
- as previously stated	-	-	-	-
- effect of adopting MFRS 9	690,916	402,436	310,143	1,403,495
At 1 January 2018 as restated	690,916	402,436	310,143	1,403,495
Transferred to Stage 1	33,571	(104,752)	(5,340)	(76,521)
Transferred to Stage 2	(41,617)	189,282	(13,849)	133,816
Transferred to Stage 3	(678)	(52,481)	108,743	55,584
Allowances made for the year	398,271	88,051	141,417	627,739
Maturity/settlement/repayment	(281,908)	(160,254)	(113,673)	(555,835)
Exchange differences	113	(113)	-	-
Amount written off			(216,045)	(216,045)
Other movements	-	-	1,278	1,278
Balance as at 31 December 2018	798,668	362,169	212,674	1,373,511

Bank

	2018 RM'000	2017 RM'000
<u>Collective Impairment</u>		
Balance as at 1 January	1,228,857	1,125,048
Restated for adoption of MFRS 9	(1,228,857)	-
Allowance made during the year	-	103,809
Balance as at 31 December	-	1,228,857

Individual impairment

Balance as at 1 January	310,143	233,670
Restated for adoption of MFRS 9	(310,143)	-
Allowance made during the year	-	332,656
Amount written back in respect of recoveries	-	(119,569)
Amount written-off	-	(128,265)
Interest recognition on impaired loans	-	(7,016)
Other adjustment	-	(1,333)
Balance as at 31 December	-	310,143

5. CREDIT RISK (Cont'd.)

Movements in allowance for losses on loans, advances and financing were as follows:

	Bank	
	2018	2017
	RM'000	RM'000
Allowance for impaired loans, advances and financing:		
Stage 1 ECL	107,752	-
Stage 2 ECL	(40,267)	-
Stage 3 ECL	117,298	-
Collective allowance made	-	103,809
Collective allowance written back	-	-
Individual allowance made	-	332,656
Individual allowance written back	-	(119,569)
Impaired loans, advances and financing		
- written-off	39,289	26,264
- recovered	(54,987)	(51,768)
	<u>169,085</u>	<u>291,392</u>

Movements in allowance for losses on loans, advances and financing for Islamic Banking Window were as follows:

	Stage 1	Stage 2	Stage 3	
	12 Months	Lifetime ECL	Lifetime ECL	
	ECL	not credit	credit	
	RM'000	impaired	impaired	Total ECL
		RM'000	RM'000	RM'000
At 1 January 2017				
- as previously stated	-	-	-	-
- effect of adopting MFRS 9	4,678	1,733	201	6,612
At 1 January 2018, as restated	4,678	1,733	201	6,612
Transferred to Stage 1	349	(4,481)	-	(4,132)
Transferred to Stage 2	(1,054)	17,132	-	16,078
Transferred to Stage 3	-	(2,301)	2,130	(171)
Allowances made for the year	66,530	3,613	49	70,192
Maturity/settlement/repayment	(56,801)	(251)	(596)	(57,648)
Other movements	2	2	(151)	(147)
At 31 December 2018	<u>13,704</u>	<u>15,447</u>	<u>1,633</u>	<u>30,784</u>

5. CREDIT RISK (Cont'd.)

	2018 RM'000	2017 RM'000
<u>Collective impairment</u>		
Balance as at 1 January	8,855	80
Restated for adoption of MFRS 9	(8,855)	-
Impairment loss made during the period	-	8,775
Balance as at 31 December	-	8,855
<u>Individual impairment</u>		
Balance as at 1 January	201	-
Restated for adoption of MFRS 9	(201)	-
Allowance made during the year	-	204
Interest recognition on impaired loans	-	(3)
Balance as at 31 December	-	201
Allowance for impairment on loans, advances and financing	2018 RM'000	2017 RM'000
Allowance for expected credit losses:		
Stage 1 ECL	9,026	-
Stage 2 ECL	13,714	-
Stage 3 ECL	1,583	-
Collective impairment:		
- made in the financial year	-	8,775
Individual impairment:		
- made in the financial year	-	204
Recovery from SIA holder *	(54)	-
	24,269	8,979

* The SIA holder is the Conventional Banking (note c)

5. CREDIT RISK (Cont'd.)

Credit Risk Mitigation

Potential credit losses are mitigated using a variety of instruments such as collateral, derivatives and guarantee. As a fundamental credit principle, the Bank generally does not grant credit facilities solely on the basis of the collateral provided. All credit facilities are granted based on the credit standing of the borrower, source of repayment and debt servicing ability.

Collateral is taken whenever possible to mitigate the credit risk assumed and the value of the collateral is monitored periodically.

The frequency of valuation depends on the type, liquidity and volatility of the collateral value. The main types of collateral taken by the Bank are cash, marketable securities, real estate, equipment, inventory and receivables. Policies and processes are in place to monitor collateral concentration.

Appropriate haircuts are applied to the market value of collateral, reflecting the underlying nature of the collateral, quality, volatility and liquidity. In addition, collateral taken by the Bank has to fulfill certain eligibility criteria (such as legal certainty across relevant jurisdictions) in order to be eligible for Internal Ratings-Based (IRB) purposes.

In extending credit facilities to SMEs, personal guarantees are also often taken as a form of moral support to ensure commitment from the principal shareholders and directors.

For IRB purposes, the Bank does not recognise personal guarantees as an eligible credit risk protection. Corporate guarantees are often obtained when the borrower's credit worthiness is not sufficient to justify an extension of credit. To recognise the effects of guarantees under the FIRB Approach, the Bank adopts the PD substitution approach whereby the PD of an eligible guarantor of an exposure will be used for calculating the capital requirement.

Exposures arising from FX and derivatives are typically mitigated through agreements such as the International Swaps and Derivatives Association (ISDA) Master Agreements, the Credit Support Annex (CSA) and the Global Master Repurchase Agreements (GMRA). Such agreements help to minimise credit exposure by allowing the Bank to offset what it owes to a counterparty against what is due from that counterparty in the event of a default.

For IRB purpose, the Bank does not recognise ISDA netting. The Current Exposure Method is used to estimate its FX and derivative exposures on a gross basis.

5. CREDIT RISK (Cont'd.)

Credit Risk Mitigation (cont'd.)

The following tables presented the total exposures which are covered by eligible credit risk mitigants of the Bank for the financial year ended 31 December 2018:

Exposure class	Exposures before CRM	Exposures covered by guarantees/ credit derivatives	Exposures covered by eligible financial collateral	Exposures covered by other eligible collateral
	RM'000	RM'000	RM'000	RM'000
<u>Credit risk</u>				
<i><u>On-balance sheet exposures</u></i>				
Sovereign/central banks	13,036,857	-	-	-
Banks, DFIs and MDBs	12,935,681	-	3,373,455	-
Insurances cos, securities firms and fund managers	40,851	-	23,525	-
Corporates	31,736,591	1,511,970	2,245,903	1,578,968
Regulatory retail	18,513,646	187,209	-	-
Residential mortgages	33,471,449	-	-	-
Other assets	1,016,986	-	-	-
Equity exposures	114,445	-	-	-
Defaulted exposures	1,286,234	1,079	1,342	32,604
Total on-balance sheet exposures	112,152,740	1,700,258	5,644,225	1,611,572
<i><u>Off-balance sheet exposures</u></i>				
OTC derivatives	1,030,521	173	1,516	8
Off-balance sheet exposures other than OTC derivatives or credit derivatives	19,793,234	166,507	850,254	280,080
Defaulted exposures	22,495	-	20	378
Total off-balance sheet exposures	20,846,250	166,680	851,790	280,466
Total on and off-balance sheet exposures	132,998,990	1,866,938	6,496,015	1,892,038

5. CREDIT RISK (Cont'd.)

Credit Risk Mitigation (cont'd.)

The following tables presented the total exposures which are covered by eligible credit risk mitigants of the Bank for the financial year ended 31 December 2017:

Exposure class	Exposures before CRM	Exposures covered by guarantees/ credit derivatives	Exposures covered by eligible financial collateral	Exposures covered by other eligible collateral
	RM'000	RM'000	RM'000	RM'000
<u>Credit risk</u>				
<i><u>On-balance sheet exposures</u></i>				
Sovereign/central banks	15,112,480	-	-	-
Banks, DFIs and MDBs	7,440,557	-	814,805	-
Insurances cos, securities firms and fund managers	22,226	-	22,026	-
Corporates	28,413,866	609,372	2,387,649	1,700,611
Regulatory retail	18,313,441	-	-	-
Residential mortgages	31,760,428	-	-	-
Other assets	692,707	-	-	-
Equity exposures	140,516	-	-	-
Defaulted exposures	1,101,582	341	1,022	14,416
Total on-balance sheet exposures	102,997,803	609,713	3,225,502	1,715,027
<i><u>Off-balance sheet exposures</u></i>				
OTC derivatives	1,170,997	869	3,422	42
Off-balance sheet exposures other than OTC derivatives or credit derivatives	20,031,147	105,562	777,543	205,403
Defaulted exposures	13,583	-	266	361
Total off-balance sheet exposures	21,215,727	106,431	781,231	205,806
Total on and off-balance sheet exposures	124,213,530	716,144	4,006,733	1,920,833

5. CREDIT RISK (Cont'd.)

Credit risk mitigation (cont'd.)

The following tables presented the total exposures which are covered by eligible credit risk mitigants of Islamic Banking Window for the financial year ended 31 December 2018:

Exposure class	Exposures before CRM	Exposures covered by guarantees/ credit derivatives	Exposures covered by eligible financial collateral	Exposures covered by other eligible collateral
	RM'000	RM'000	RM'000	RM'000
<u>Credit risk</u>				
<i><u>On-balance sheet exposures</u></i>				
Sovereign/central banks	2,808,928	-	-	-
Banks, DFIs and MDBs	8,117	-	-	-
Corporates	880,506	111,522	14,156	1,143
Regulatory retail	510,755	-	-	-
Residential mortgages	1,334,476	-	-	-
Other assets	19,488	-	-	-
Defaulted exposures	11,070	-	-	-
Total on-balance sheet exposures	5,573,340	111,522	14,156	1,143
<i><u>Off-balance sheet exposures</u></i>				
OTC derivatives	1,745	-	-	-
Off-balance sheet exposures other than OTC derivatives or credit derivatives	610,352	2,185	4,561	-
Total off-balance sheet exposures	612,097	2,185	4,561	-
Total on and off-balance sheet exposures	6,185,437	113,707	18,717	1,143

5. CREDIT RISK (Cont'd.)

Credit Risk Mitigation (cont'd.)

The following tables presented the total exposures which are covered by eligible credit risk mitigants of Islamic Banking Window for the financial year ended 31 December 2017:

Exposure class	Exposures before CRM	Exposures covered by guarantees/ credit derivatives	Exposures covered by eligible financial collateral	Exposures covered by other eligible collateral
	RM'000	RM'000	RM'000	RM'000
<u>Credit risk</u>				
<i><u>On-balance sheet exposures</u></i>				
Sovereign/central banks	200,846	-	-	-
Banks, DFIs and MDBs	13,757	-	-	-
Corporates	214,485	87,750	1,015	-
Regulatory retail	282,590	-	-	-
Residential mortgages	354,450	-	-	-
Other assets	175	-	-	-
Defaulted exposures	503	-	-	-
Total on-balance sheet exposures	1,066,806	87,750	1,015	-
<i><u>Off-balance sheet exposures</u></i>				
Off-balance sheet exposures other than OTC derivatives or credit derivatives	385,076	8,842	579	-
Total off-balance sheet exposures	385,076	8,842	579	-
Total on and off-balance sheet exposures	1,451,882	96,592	1,594	-

OFF-BALANCE SHEET EXPOSURES AND COUNTERPARTY CREDIT RISK

Counterparty Credit Risk

Unlike normal lending risk where the notional at risk can be determined with a high degree of certainty during the contractual period, counterparty credit risk exposure fluctuates with market variables. Counterparty credit risk is measured as the sum of current mark-to-market plus appropriate add-on factor for potential future exposure (PFE). The PFE factor is an estimate of the maximum credit exposure over the remaining life of the foreign exchange (FX)/ derivative transactions and is used for limit setting and internal risk management.

The Bank also has established policies and procedures to manage wrong-way risk, i.e. where the counterparty credit exposure is correlated positively with its default risk. Transactions that exhibit such characteristics are identified and reported to Senior Management on a regular basis. In addition, transactions with specific wrong-way risk are generally rejected at the underwriting stage.

Credit Exposures from Foreign Exchange and Derivatives

Pre-settlement limits for FX and derivative transactions are established using the PFE approach. This approach takes into consideration the transaction currency and tenor to address the credit risk exposures arising from adverse market movements.

5. CREDIT RISK (Cont'd.)

The Off-Balance Sheet Exposures and their related counterparty credit risk of the Bank for the financial year ended 31 December 2018 were as follows:

Description	Principal Amount	Positive Fair Value of Derivative Contracts	Credit Equivalent Amount	RWA
	RM'000	RM'000	RM'000	RM'000
Direct credit substitutes	3,189,451		3,124,810	2,346,211
Transaction related contingent items	6,192,218		3,104,378	2,184,179
Short Term Self Liquidating trade related contingencies	420,884		92,276	49,619
Foreign exchange related contracts				
One year or less	25,089,263	112,941	432,896	134,002
Over one year to five years	604,766	7,499	39,997	21,641
Over five years	-	-	-	-
Interest/Profit rate related contracts				
One year or less	7,938,700	5,581	41,229	20,365
Over one year to five years	16,739,543	165,124	818,849	486,248
Over five years	444,858	8,569	62,165	47,091
Equity related contracts				
One year or less	368,736	42,506	21,318	19,472
Over one year to five years	592,241	362	24,477	3,863
Over five years	-	-	-	-
Commodity contracts				
One year or less	491,782	33,782	70,992	14,754
Over one year to five years	142,850	131	16,031	2,818
Over five years	-	-	-	-
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	11,436,035		6,463,900	4,894,091
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	16,268,384		801,816	175,486
Any commitments that are unconditionally cancelled at any time by the bank without prior notice or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness	11,595,281		5,724,250	629,471
Unutilised credit card lines	73,378		14,676	13,870
Off-balance sheet for securitisation	-		-	-
Total	101,588,370	376,495	20,854,060	11,043,181

5. CREDIT RISK (Cont'd.)

OFF-BALANCE SHEET EXPOSURES AND COUNTERPARTY CREDIT RISK (Cont'd.)

The Off-Balance Sheet Exposures and their related counterparty credit risk of the Bank for the financial year ended 31 December 2017 were as follows:

Description	Principal Amount	Positive Fair Value of Derivative Contracts	Credit Equivalent Amount	RWA
	RM'000	RM'000	RM'000	RM'000
Direct credit substitutes	3,202,391		3,155,460	2,260,927
Transaction related contingent items	6,037,933		3,034,380	2,139,796
Short Term Self Liquidating trade related contingencies	524,618		115,387	93,389
Foreign exchange related contracts				
One year or less	24,198,577	296,421	635,018	159,262
Over one year to five years	204,645	99	11,512	11,065
Over five years	-	-	-	-
Interest/Profit rate related contracts				
One year or less	7,689,651	95,793	152,398	63,654
Over one year to five years	15,526,922	133,699	746,707	542,178
Over five years	58,084	234	4,447	2,815
Equity related contracts				
One year or less	464,921	3,425	22,890	18,337
Over one year to five years	1,093,643	-	43,746	7,730
Over five years	-	-	-	-
Commodity contracts				
One year or less	215,980	7,965	23,231	9,396
Over one year to five years	537,233	2,752	55,063	23,314
Over five years	-	-	-	-
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	11,697,356		6,597,870	4,202,984
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	14,085,535		681,934	141,414
Any commitments that are unconditionally cancelled at any time by the bank without prior notice or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness	11,493,526		5,928,435	655,787
Unutilised credit card lines	79,135		15,827	14,915
Off-balance sheet for securitisation	-		-	-
Total	97,110,150	540,388	21,224,305	10,346,963

5. CREDIT RISK (Cont'd.)

The off-balance sheet exposures and their related counterparty credit risk of the Islamic Banking Window for the financial year ended 31 December 2018 were as follows:

Description	Principal amount	Positive fair value of derivative contracts	Credit equivalent amount	RWA
	RM'000	RM'000	RM'000	RM'000
Direct credit substitutes	11,092		11,092	5,833
Transaction related contingent items	31,974		15,987	14,260
Short-term self-liquidating trade-related contingencies	1,717		343	71
Foreign exchange related contracts with an original maturity up to one year	113,442		1,745	422
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	1,052,207		582,650	114,732
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	162,598		280	126
Total	1,373,030	-	612,097	135,444

The off-balance sheet exposures and their related counterparty credit risk of the Islamic Banking Window for the financial year ended 31 December 2017 were as follows:

Description	Principal amount	Positive fair value of derivative contracts	Credit equivalent amount	RWA
	RM'000	RM'000	RM'000	RM'000
Direct credit substitutes	7,134		7,134	4,522
Transaction related contingent items	11,096		5,548	6,343
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	590,785		371,644	167,159
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	84,534		750	838
Total	693,549	-	385,076	178,862

6. MARKET RISK

Market risk refers to the risk of losses to the Bank from movements in the volatility of the market rates or prices (e.g. changes in interest rates, foreign exchange rates, equity prices, commodity prices, credit spreads) of the underlying asset.

Market risk is governed by the Bank's ALCO, which meets monthly to review and provide directions on market risk matters. The Market Risk Management (MRM) and Balance Sheet Risk Management (BSRM) under Risk Management supports the RMC, RCC and ALCO with independent assessment of the market risk profile of the Bank.

The Bank's market risk framework comprises market risk policies, practices and the control structure with appropriate delegation of authority and market risk limits. The Bank employs valuation methodologies that are in line with sound market practices. Valuation and risk models are independently validated. In addition, a Product/Service Programme process ensures that market risk issues identified are adequately addressed prior to the launch of products and services.

One of the Bank's main objectives in undertaking trading activities is to provide customer-centric products to support client franchise business and to cater for clients' hedging needs. We review and enhance our management of derivatives risks continually to ensure that the complexities of the business are controlled appropriately.

Overall market risk appetite is balanced at the Bank and business unit levels with the targeted revenue, and takes into account the capital position of the Bank. This ensures that the Bank remain well-capitalised even under stress conditions. The risk appetite is translated into risk limits that are delegated to business units. These risk limits have proportional returns that are commensurate with the risks taken.

Market Risk appetite is provided for all trading exposures and non-trading FX exposures within the Bank.

The Bank currently adopts the Standardised Approach for the calculation of regulatory market risk capital but uses internal models to measure and control trading market risks. The financial products which are warehoused, measured and controlled using internal models include FX and FX options, plain vanilla interest rate contracts, interest rate option, cross currency swap, government bonds, quasi government bonds, corporate bonds, commodity contracts and commodity options.

6. MARKET RISK (Cont'd.)

The Bank estimates a daily Value-at-Risk (VaR) within a 99 per cent confidence interval using the historical simulation method, as a control for market risk. The method assumes that possible future changes in market rates may be implied by observed historical market movements.

As VaR is the statistical measure for potential losses, the VaR measures are backtested against profit or loss of the trading book to validate the robustness of the methodology. The backtesting process and analyses whether the exceptions are due to model deficiencies or market volatility. All backtest exceptions are tabled at ALCO with recommended actions and resolutions.

To complement the VaR measure, stress and scenario tests are performed to identify the Bank's vulnerability to event risk. These tests serve to provide early warnings of plausible extreme losses to facilitate proactive management of market risks. The Bank's daily VaR on 31 December 2018 was RM5.08 million.

	Year End RM'000	High RM'000	Low RM'000	Average RM'000
2018				
Interest rate	3,677	10,470	1,998	3,978
Foreign exchange	3,572	6,818	1,162	3,128
Commodities	61	458	6	146
Total diversified VaR	5,082	10,463	3,306	5,572
2017				
Interest rate	2,447	16,774	1,430	6,197
Foreign exchange	4,052	9,935	151	4,797
Commodities	410	1,971	25	573
Total diversified VaR	4,198	16,848	1,254	7,745

7. INTEREST RATE RISK/RATE OF RETURN RISK IN THE BANKING BOOK (IRR/RORBB)

Interest/ profit rate risk in the banking book (IRR/RORBB) is defined as the risk of potential loss of capital or reduction in earnings due to changes in interest rates environment.

The ALCO maintains oversight of the effectiveness of the interest/profit rate risk management structure. The BSRM supports the ALCO in monitoring the interest/profit rate risk profile of the banking book.

The primary objective of interest/profit rate risk management is to protect and enhance capital or economic net worth through adequate, stable and reliable growth in net interest/profit earnings under a broad range of possible economic conditions.

Banking book interest/profit rate risk exposure is quantified on a monthly basis using a combination of static analysis tools and dynamic simulation techniques. Static analysis tools include repricing schedules and sensitivity analysis. They provide indications of the potential impact of interest/profit rate changes on interest/profit income and price value through the analysis of the sensitivity of assets and liabilities to changes in interest/profit rates. Interest/profit rate sensitivity varies with different repricing periods, currencies and embedded options. Mismatches in the longer tenor will experience greater change in the price-value of interest/profit rate positions than similar positions in the shorter tenor.

In the dynamic simulation process, both the Net Interest/Profit Income (NII/NPI) and Economic Value of Equity (EVE) approaches are applied to assess interest/profit rate risk. The potential effects of interest/profit rate change on NII/NPI are estimated by simulating the possible future course of interest/profit rates, expected changes in business activities over time as well as embedded options. Changes in interest/profit rates are simulated using different interest/profit rate scenarios such as changes in the shape of the yield curve, including high and low rates, as well as positive and negative tilt scenarios.

NII/NPI simulation is performed to quantify a forward looking impact on NII/NPI for the next 12 months under various interest/profit rate scenarios to assess the impact of interest/profit rate movements on income. In EVE sensitivity simulation, the present values for repricing cash flows are computed, with the focus on changes in EVE under different interest/profit rate scenarios. This economic perspective measures interest/profit rate risks across the full maturity profile of the balance sheet, including off-balance sheet items.

Stress tests are also performed regularly to determine the adequacy of capital in meeting the impact of extreme interest/profit rate movements on the balance sheet. Such tests are also performed to provide early warnings of potential extreme losses, facilitating the proactive management of interest/profit rate risks in an environment of rapid financial market changes.

The risks arising from the trading book, such as interest/profit rates, foreign exchange rates and equity prices are managed and controlled under the market risk framework that is discussed under the Market Risk section.

7. INTEREST RATE RISK/RATE OF RETURN RISK IN THE BANKING BOOK (IRR/RORBB) (Cont'd.)

Interest/Profit Rate Sensitivity Analysis - Banking Book

The table below showed the results at 100 and 200 basis points parallel interest/profit rate shocks to EVE and NII/NPI. The reported figures were based on the upward and downward parallel movement of the yield curve. The repricing profile of loans/financings and deposits that do not have maturity dates are generally based on the earliest possible repricing dates taking into account the notice period to be served to customers.

Economic Value of Equity (EVE)

31-Dec-18	Increase/ (Decrease) in basis points	Sensitivity of EVE	Increase/ (Decrease) in basis points	Sensitivity of EVE
Currency		RM'million		RM'million
Total	+200/(200)	(262.3)/332.2	+100/(100)	(139.2)/156.6
MYR	+200/(200)	(263.5)/333.4	+100/(100)	(139.8)/157.2
USD	+200/(200)	1.2/(1.2)	+100/(100)	0.6/(0.6)

31-Dec-17	Increase/ (Decrease) in basis points	Sensitivity of EVE	Increase/ (Decrease) in basis points	Sensitivity of EVE
Currency		RM'million		RM'million
Total	+200/(200)	59.1/(32.1)	+100/(100)	26.5/(19.8)
MYR	+200/(200)	60.2/(33.1)	+100/(100)	27.0/(20.3)
USD	+200/(200)	(1.1)/1.0	+100/(100)	(0.5)/0.5

Net Interest/Profit Income (NII/NPI)

31-Dec-18	Increase/ (Decrease) in basis points	Sensitivity of NII/NPI	Increase/ (Decrease) in basis points	Sensitivity of NII/NPI
Currency		RM'million		RM'million
Total	+200/(200)	549.74/(549.71)	+100/(100)	260.89/(260.89)
MYR	+200/(200)	549.82/(549.79)	+100/(100)	260.93/(260.93)
USD	+200/(200)	(0.08)/0.08	+100/(100)	(0.04)/0.04

31-Dec-17	Increase/ (Decrease) in basis points	Sensitivity of NII	Increase/ (Decrease) in basis points	Sensitivity of NII
Currency		RM'million		RM'million
Total	+200/(200)	462.3/(463.7)	+100/(100)	204.2/(204.2)
MYR	+200/(200)	464.3/(460.4)	+100/(100)	205.2/(205.2)
USD	+200/(200)	(2.0)/(3.3)	+100/(100)	(1.0)/1.0

8. LIQUIDITY RISK

Liquidity risk is the risk to the Bank's earnings or capital from its inability to meet its obligations or fund increases in assets as they fall due, without incurring significant costs or losses. The Bank maintains sufficient liquidity to fund its day-to-day operations, to meet deposit withdrawals and loan/financing disbursements, to participate in new investments, and to repay borrowings. Hence, liquidity is managed in a manner to address known as well as unanticipated cash funding needs.

Liquidity risk is managed in accordance with a framework of policies, controls and limits. These policies, controls and limits enable the Bank to monitor and manage liquidity risk to ensure that sufficient sources of funds are available over a range of market conditions. These include minimising excessive funding concentrations by diversifying the sources and terms of funding as well as maintaining a portfolio of high quality and marketable liquid assets.

The Bank takes a conservative stance in its liquidity management by continuing to gather core deposits, ensuring that liquidity limits are strictly adhered to and that there are adequate liquid assets to meet cash shortfalls.

The distribution of deposits is managed actively to ensure a balance between cost effectiveness, continued accessibility to funds, and diversification of funding sources. Important factors in ensuring liquidity are competitive pricing, proactive management of the Bank's core deposits and the maintenance of customer confidence.

Aligned with the regulatory liquidity risk management framework, the Bank's liquidity risk is measured and managed on a projected cash flow basis. The Bank's liquidity is monitored under business-as-usual and stress scenarios. Cash flow mismatch limits are established to limit the Bank's liquidity exposure. The Bank also employs liquidity early warning indicators and trigger points to signal possible contingency situations.

With regard to the regulatory requirements on Liquidity Coverage Ratio (LCR) which are effective from 1 June 2015, the Bank's ratios were above 100 per cent for both the All Currency LCR and the Ringgit Malaysia LCR as at 31 December 2018.

Contingency funding plans are in place to identify liquidity crisis using a series of warning indicators. Crisis management processes and various strategies including funding and communication have been developed to minimise the impact of any liquidity crunch.

The policy of the Bank is to be self-sufficient in its funding capabilities, notwithstanding that it has the support of parent bank in Singapore.

The table in Note 40 to the financial statements on pages 159-163 provides the maturity mismatch analysis of the Bank's near and long-term time bands relating to the cash inflows and outflows based on contractual maturity arising from the Bank's activities.

9. OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Operational risk includes banking operations risk, fraud risk, legal risk, regulatory compliance risk (including Shariah non-compliance risk), reputational risk, outsourcing risk and technology risk.

The Bank's primary objective is to foster a sound reputation and operating environment.

Operational Risk Governance, Framework and Programmes

Operational risk is managed through a framework of policies and procedures by which business and support units properly identify, assess, monitor, mitigate and report their risks. The ORMC meets monthly to provide oversight of operational risk matters across the Bank.

The Operational Risk Governance structure adopts the Three Lines of Defence Model. The business and support units, as the First Line of Defence, are responsible for establishing a robust control environment as part of their day-to-day operations. Each business and support unit is responsible for implementing the operational risk framework and policies, embedding appropriate internal controls into processes and maintaining business resilience for key activities.

The Operational Risk Management under Risk Management, as the Second Line of Defence, provides an overarching governance over operational risk through relevant frameworks, policies, programmes and system. It also monitors and reports key risk self-assessment results, outsourcing matters, operational risk indicator breaches, self-identified operational risk and operational risk incidents to Management, ORMC and the Board.

Internal Audit, as the Third Line of Defence, provides an independent and objective assessment on the overall effectiveness of the risk governance framework and internal control through periodic audit reviews.

Technology Risk is defined as any potential adverse outcome, damage, loss, violation, failure or disruption arising from the use of or reliance on information and communication technologies. Governance over technology risks remains with ORMC to enable a holistic oversight of operational risk matters across the Bank. The Bank has an established technology risk management framework to enable technology and cyber risks be managed in a systematic and consistent manner. A dedicated Technology Risk Management (TRM) function has been set-up in ORM to drive the governance and oversight for technology risk management across the Bank. TRM will work closely with business and support units to oversee, review and strengthen their current practices in technology risk management.

Regulatory compliance risk refers to the risk of non-compliance with laws, regulations, rules, standards and codes of conduct. This risk is identified, monitored and managed through a structured framework of policies, procedures and guidelines maintained by the Bank. The framework also manages the risk of regulatory breaches and sanctions relating to Anti-Money Laundering and Countering the Financing of Terrorism.

9. OPERATIONAL RISK (Cont'd)

Legal risk arises from unenforceable, unfavourable, defective or unintended contracts, lawsuits or claims, developments in laws and regulations, or non-compliance with applicable laws and regulations. Business and support units work with both internal and external legal counsels to ensure that legal risks are effectively managed.

Reputational risk is the risk of adverse impact on earnings, liquidity or capital arising from negative stakeholder perception or opinion of the Bank's business practices, activities and financial condition. The Bank recognises the impact of reputational risk and has developed a policy to identify and manage the risk across the Bank.

The Bank's insurance programme covers civil and crime liability, cyber security, property damage, terrorism, public liability, as well as directors' and officers' liability. The programme reduces operational losses through adequate insurance coverage.

Fraud Risk

Fraud is defined as an act, with an element to deceive or to conceal facts, and is not restricted to the gain of monetary or material benefits.

The Bank actively manages fraud risks. The Integrated Fraud Management (IFM) under Risk Management, drives strategy and governance and oversees the framework of fraud risk management across the Bank. The corporate governance of fraud risk is provided by the Audit Committee at Board level, and primarily by the ORMC at Management level.

All employees are required to uphold the UOB Code of Conduct, which includes anti-bribery and anti-corruption provisions. The Bank's fraud hotline to IFM ensures independent fraud investigation. IFM also works closely with business and support units to strengthen their current practices across the five pillars of prevention, detection, response, remediation and reporting.

10. EQUITIES (Disclosures for Banking Book position)

The following table presented the equity exposures in the banking book.

These exposures were classified under available-for-sale (AFS) securities which were being measured at fair value.

Type of Equities	Bank			
	31-Dec-18		31-Dec-17	
	Exposures	RWA	Exposures	RWA
	RM'000	RM'000	RM'000	RM'000
Publicly traded equity exposures * mainly acquired via loan restructuring activities	1,956	5,868	2,569	7,707
All other equity exposures	112,489	112,489	137,947	551,788
Total	114,445	118,357	140,516	559,495

	Bank	
	31-Dec-18 RM'000	31-Dec-17 RM'000
Realised (loss)/gains arising from sales and liquidation	-	(11)
Unrealised gains included in fair value reserve	101,907	127,978

As at 31 December 2018, there were no equity exposures under Islamic Banking Window.

PROFIT SHARING INVESTMENT ACCOUNTS AND SHARIAH GOVERNANCE

Profit Sharing Investment Accounts

This disclosure is not applicable to United Overseas Bank (Malaysia) Bhd's Islamic Banking Window.

Shariah Governance

This is disclosed in United Overseas Bank (Malaysia) Bhd's Annual Report, under the section "Corporate Governance".

No actual Shariah non-compliance event has been detected for the financial year ended 31 December 2018. As such, no Shariah non-compliant income has been recorded for the year.