



Pillar 3 Disclosure Report

Quarter ended December 2019

Maybank Singapore Limited

Incorporated in Singapore

Company Registration Number: 201804195C

TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	ATTESTATION STATEMENT PURSUANT TO MAS NOTICE 637 - DISCLOSURE REQUIREMENTS (PILLAR 3)	2
3	CAPITAL ADEQUACY.....	3
3.1	Key Metrics	4
3.2	Geographical Distribution of Credit Exposures Used in the Countercyclical Capital Buffer	5
4	LINKAGES BETWEEN FINANCIAL STATEMENTS AND REGULATORY EXPOSURES.....	6
4.1	Differences between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories	6
4.2	Main Sources of Differences between Regulatory Exposure Amounts and Carrying Amounts in Financial Statements	8
4.3	Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts.....	9
4.4	Prudent Valuation Adjustments.....	10
5	COMPOSITION OF CAPITAL.....	11
5.1	Reconciliation of Regulatory Capital to Balance Sheet.....	11
5.2	Composition of Regulatory Capital.....	12
5.3	Main Features of Regulatory Capital Instruments	16
6	LEVERAGE RATIO	18
6.1	Leverage Ratio.....	18
6.2	Leverage Ratio Summary Comparison Table	18
6.3	Leverage Ratio Common Disclosure Template	18

7	RISK MANAGEMENT APPROACH	20
8	OVERVIEW OF RISK-WEIGHTED ASSETS	22
9	GENERAL QUALITATIVE DISCLOSURES ON CREDIT RISK	24
10	CREDIT QUALITY OF ASSETS	25
11	CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES.....	26
12	ADDITIONAL DISCLOSURES RELATED TO THE CREDIT QUALITY OF ASSETS	27
12.1	Breakdown of Major Types of Credit Risk Exposures by Geographical Areas	29
12.2	Breakdown of Major Types of Credit Risk Exposures by Industry Sector	30
12.3	Breakdown of Major Types of Credit Risk Exposures by Residual Maturity.....	31
12.4	Breakdown by Geographical Areas	32
12.5	Breakdown by Industry	32
12.6	Ageing Analysis of Past Due Loan Exposures.....	33
12.7	Restructured Exposures	33
13	QUALITATIVE DISCLOSURES RELATED TO CRM TECHNIQUES.....	34
14	OVERVIEW OF CRM TECHNIQUES	35
15	QUALITATIVE DISCLOSURES ON THE USE OF EXTERNAL CREDIT RATINGS UNDER THE SA(CR) ..	36
16	CREDIT RISK EXPOSURES UNDER STANDARDISED APPROACH	37
16.1	SA(CR) and SA(EQ) - Credit Risk Exposure and CRM Effects	37
16.2	SA(CR) and SA(EQ) - Exposures by Asset Classes and Risk Weights	38

17	QUALITATIVE DISCLOSURES FOR IRBA MODELS	39
17.1	Application of Internal Ratings	40
17.2	Non-Retail Portfolio.....	41
17.3	Credit Risk Models and Tools.....	41
17.4	Retail Portfolio	42
18	CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE	43
19	EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM.....	46
20	IRBA - RWA FLOW STATEMENT FOR CREDIT RISK EXPOSURES	46
21	IRBA - BACKTESTING OF PD PER PORTFOLIO	47
22	SPECIALISED LENDING AND EQUITIES UNDER THE SIMPLE RISK WEIGHT METHOD.....	49
23	QUALITATIVE DISCLOSURES RELATED TO CCR	50
24	ANALYSIS OF CCR BY APPROACH.....	51
25	CVA RISK CAPITAL REQUIREMENTS	51
26	CCR EXPOSURES BY PORTFOLIO AND RISK WEIGHTS.....	52
27	CCR EXPOSURES BY PORTFOLIO AND RD RANGE.....	53
28	COMPOSITION OF COLLATERAL FOR CCR EXPOSURE	54
29	CREDIT DERIVATIVE EXPOSURES.....	55

30	EXPOSURE TO CENTRAL COUNTERPARTIES	55
31	SECURITISATION	55
32	QUALITATIVE DISCLOSURES RELATED TO MARKET RISK	56
33	MARKET RISK UNDER STANDARDISED APPROACH.....	56
34	OPERATIONAL RISK.....	57
35	INTEREST RATE RISK IN THE BANKING BOOK (“IRRBB”).....	58
36	REMUNERATION	59
36.1	Key Features of the Bank’s Total Rewards Framework.....	59
36.2	Remuneration of Senior Officers and Other Material Risk Takers	60
36.3	Remuneration Awarded During the Financial Year	61
36.4	Special Payments.....	62
36.5	Deferred Remuneration	62

1 INTRODUCTION

The Monetary Authority of Singapore (“MAS”) has designated Maybank Singapore Limited (“MSL”) as a Domestic Systemically Important Bank (“D-SIB”) in Singapore since 2015. As such, MSL is subject to the reporting of MAS Notice 637 Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore.

The following disclosures are made pursuant to Notice 637 “Notice on Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore” (“MAS Notice 637”) issued by MAS.

MSL recognises the importance of MAS Notice 637 in promoting market discipline by requiring disclosures of key information relating to regulatory capital and risk exposures on a consistent and comparable basis that will enable stakeholders to better understand and assess a reporting bank’s business and risk profile vis-à-vis other banks.

For the purpose of calculating its risk-weighted assets, MSL applies the Internal Ratings-Based Approach (“IRBA”) and Standardised Approach (“SA”) to relevant credit exposures to ascertain its credit risk-weighted assets. For market risk and operational risk, MSL applies the SA and Basic Indicator Approach to compute the market risk-weighted assets and operational risk-weighted assets respectively.

The numbers in this document are presented in Singapore dollars and rounded to the nearest million, unless otherwise stated.

2 ATTESTATION STATEMENT PURSUANT TO MAS NOTICE 637 - DISCLOSURE REQUIREMENTS (PILLAR 3)

The Pillar 3 disclosures as at 31 December 2019 have been prepared in accordance with the internal control processes approved by MSL Board of Directors.



Dr John Lee Hin Hock
Chief Executive Officer
15 April 2020

3 CAPITAL ADEQUACY

MSL's approach to capital management is driven by its strategic objectives and takes into account all relevant regulatory, economic and commercial environments in which MSL and the Maybank Group operate. MSL regards having a strong capital position as essential to the bank's business strategy and competitive position. As such, implications on the bank's capital position are taken into account by the Board and senior management prior to implementing any major business decision in order to preserve the bank's overall capital strength.

The quality and composition of capital are key factors in the Board and senior management's evaluation of the bank's capital adequacy position. MSL places strong emphasis on the quality of its capital and accordingly holds a higher amount of its capital in the form of common equity which is permanent and has the highest loss absorption capability on a going concern basis.

The Board maintains oversight of the regulatory capital of MSL in line with regulatory requirements under the MAS Notice 637 and expectations of various stakeholders such as regulators. To date, MSL has complied with all externally-imposed regulatory capital requirements throughout the financial period.

3.1 Key Metrics

The following table provides an overview of the key prudential regulatory metrics related to regulatory capital, leverage ratio and liquidity standards for MSL.

SGD million		(a)	(b)	(c)	(d)	(e)
		31 Dec 2019	30 Sep 2019	30 Jun 2019	31 Mar 2019	31 Dec 2018
Available amount (amounts)						
1	CET1 capital	2,517	2,381	2,385	2,413	2,405
2	Tier 1 capital	2,517	2,381	2,385	2,413	2,405
3	Total capital	2,559	2,426	2,431	2,456	2,442
Risk weighted assets (amounts)						
4	Total RWA	13,836	14,549	14,175	14,288	14,233
Risk-based capital ratios as a percentage of RWA						
5	CET1 ratio (%)	18.2	16.4	16.8	16.9	16.9
6	Tier 1 ratio (%)	18.2	16.4	16.8	16.9	16.9
7	Total capital ratio (%)	18.5	16.7	17.1	17.2	17.2
Additional CET1 buffer requirements as a percentage of RWA						
8	Capital conservation buffer requirement (2.5% from 2019) (%)	2.5	2.5	2.5	2.5	1.9
9	Countercyclical buffer requirement (%)	0.0	0.0	0.0	0.0	0.0
10	Bank G-SIB and/or D-SIB additional requirements (%)	-	-	-	-	-
11	Total of bank CET1 specific buffer requirements (%) (row 8 + row 9 + row 10)	2.5	2.5	2.5	2.5	1.9
12	CET1 available after meeting the Reporting Bank's minimum capital requirements (%)	8.5	6.7	7.1	7.2	7.2
Leverage Ratio (SGD million / %)						
13	Total Leverage Ratio exposure measure	39,882	38,832	36,789	37,375	37,414
14	Leverage Ratio (%) (row 2 / row 13)	6.3	6.1	6.5	6.5	6.4
Liquidity Coverage Ratio (SGD million / %)¹						
15	Total High Quality Liquid Assets	15,792	13,700	12,916	13,182	11,162
16	Total net cash outflow	12,527	11,797	11,451	13,578	12,010
17	Liquidity Coverage Ratio (%)	129	117	113	97	94
Net Stable Funding Ratio (SGD million / %)²						
18	Total available stable funding	41,109	40,192	37,323	37,397	36,638
19	Total required stable funding	34,319	34,816	35,357	35,126	35,042
20	Net Stable Funding Ratio (%)	120	115	106	106	105

¹ MSL is subject to the reporting of MAS Notice 649 Liquidity Coverage Ratio on Country Group basis (consisting of Malayan Banking Berhad, Singapore Branch and Maybank Singapore Limited). Data presented are based on simple averages of daily observations for the respective quarter.

² MSL is subject to the reporting of MAS Notice 652 Net Stable Funding Ratio on Country Group basis (consisting of Malayan Banking Berhad, Singapore Branch and Maybank Singapore Limited).

3.2 Geographical Distribution of Credit Exposures Used in the Countercyclical Capital Buffer

The Basel III standards introduced the Countercyclical Capital Buffer (“CCyB”) framework to achieve a broader macro prudential goal of protecting the banking sector from periods of excess aggregate credit growth.

The CCyB is applied on a discretionary basis by banking supervisors in the respective jurisdictions.

The table below provides an overview of the geographical distribution of the risk-weighted assets (“RWA”) of private sector credit exposures relevant to the calculation of the countercyclical capital buffer.

The Basel III CCyB is calculated as the weighted average of the buffers in effect in the jurisdictions to which banks have private sector credit exposures, subject to the relevant transitional caps under MAS Notice 637.

MSL attributes private sector credit exposures to jurisdictions based primarily on the jurisdiction of risk of each obligor or its guarantor, if applicable.

The determination of an obligor’s jurisdiction of risk is based on the look-through approach, taking into consideration factors such as the economic activity and availability of parent bank’s support.

SGD million	(a)	(b)	(c)	(d)
Geographical breakdown	Country-specific countercyclical buffer requirement	RWA for private sector credit exposures used in the computation of the countercyclical buffer	Bank-specific countercyclical buffer requirement	Countercyclical buffer amount
France	0.25%	*		
Hong Kong	2.00%	17		
Norway	2.50%	*		
Sweden	2.50%	*		
United Kingdom	1.00%	3		
Others		10,439		
Total		10,460	0.0%	*

* represents amounts of less than S\$0.5 million

4 LINKAGES BETWEEN FINANCIAL STATEMENTS AND REGULATORY EXPOSURES

4.1 Differences between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories

The following table shows the breakdown of the amount reported in the financial statements by regulatory risk categories.

SGD million	(a)	(b)	(c)	(d)	(e)	(f)
	Carrying amounts as reported in balance sheet of published financial statements	Carrying amounts of items -				
subject to credit risk requirements		subject to CCR requirements	subject to securitisation framework	subject to market risk requirements		
Assets						
Cash and balance with a central bank	1,144	1,144	-	-	-	-
Singapore Government securities and treasury bills	4,582	4,582	-	-	-	-
Debt securities	130	130	-	-	-	-
Balances and placements with and loans to banks	5,563	157	5,406	-	-	-
Bills receivable	29	29	-	-	-	-
Loans and advances to non-bank customers	21,966	21,966	-	-	-	-
Amount due from related corporations	3,772	3,772	-	-	-	-
Other assets	399	361	38	-	33	-
Intangible assets	101	101	-	-	-	-
Right-of-use assets	52	52	-	-	-	-
Property, plant and equipment	18	18	-	-	-	-
Total Assets	37,756	32,312	5,444	-	33	-

SGD million	(a)	(b)	(c)	(d)	(e)	(f)
	Carrying amounts as reported in balance sheet of published financial statements	Carrying amounts of items -				
		subject to credit risk requirements	subject to CCR requirements	subject to securitisation framework	subject to market risk requirements	not subject to capital requirements or subject to deduction from regulatory capital
Liabilities						
Deposits and balances of banks	100	-	-	-	-	100
Deposits of non-bank customers	34,649	-	-	-	-	34,649
Bills payable	60	-	-	-	-	60
Amount due to related corporations	5	-	-	-	-	5
Current tax payable	40	-	-	-	-	40
Other liabilities	300	-	35	-	35	266
Lease liabilities	51	-	-	-	-	51
Deferred tax liabilities	11	-	-	-	-	11
Total Liabilities and Head Office Account	35,216	-	35	-	35	35,182

The sum of amounts disclosed under columns (b) to (f) for the above table can exceed the amounts disclosed under column (a) as some of the assets and liabilities can be subject to regulatory capital charges for credit risk, counterparty risk and market risk.

4.2 Main Sources of Differences between Regulatory Exposure Amounts and Carrying Amounts in Financial Statements

The following table provides information on the main sources of differences between regulatory exposure amounts and carrying amounts in the financial statements. Items subject to market risk requirements have not been included in the table below as they are computed based on notional positions in the relevant underlying instruments.

SGD million		(a)	(b)	(c)
		Total	Items subject to -	
			credit risk requirements	CCR requirements
1	Asset carrying amount under regulatory scope of consolidation ³	37,756	32,312	5,444
2	Liabilities carrying amount under regulatory scope of consolidation ³	35	-	35
3	Total net amount under regulatory scope of consolidation	37,721	32,312	5,409
4	Off-balance sheet amounts		3,517	-
5	Differences due to derivatives and securities financing transaction		-	(5,174)
6	Differences due to consideration of provision		125	1
7	Other differences		(347)	*
8	Exposure amounts considered for regulatory purposes	35,843	35,607	236

* represents amounts of less than \$0.5 million

³ The total column excludes amounts subject to deduction from capital or not subject to regulatory capital requirements.

4.3 Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts

MSL's regulatory scope of consolidation is identical to its accounting scope of consolidation. However, the key differences between the carrying amounts in the financial statements and regulatory exposure amounts under each framework are:

- a) Off-balance sheet amounts include contingent liabilities and undrawn portions of committed facilities after application of credit conversion factors.
- b) Derivative regulatory exposures include potential future exposures.
- c) In the financial statements, the carrying value of assets are net of allowances. However, for regulatory reporting, the carrying value of assets are gross of allowances under IRBA and net of specific allowances under SA.
- d) Other differences could include differences arising from the recognition of credit risk mitigation, inclusion of repurchase agreement for counterparty credit risk, etc.

4.4 Prudent Valuation Adjustments

The following table provides a breakdown of the constituent elements of prudent valuation adjustment (“PVA”). Valuation adjustments relating to Mid-market value and Unearned credit spreads have been taken in financial reporting.

SGD million		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
		Equity	Interest Rate	FX	Credit	Commodities	Total	of which: in the trading book	of which: in the banking book
1	Closeout uncertainty	-	-	-	-	-	-	-	-
2	of which: Mid-market value	-	*	*	-	-	*	-	*
3	of which: Closeout cost	-	-	-	-	-	-	-	-
4	of which: Concentration	-	-	-	-	-	-	-	-
5	Early termination	-	-	-	-	-	-	-	-
6	Model risk	-	-	-	-	-	-	-	-
7	Operational risk	-	-	-	-	-	-	-	-
8	Investing and funding costs	-	-	-	-	-	-	-	-
9	Unearned credit spreads	-	*	*	-	-	*	-	*
10	Future administrative costs	-	-	-	-	-	-	-	-
11	Other	-	-	-	-	-	-	-	-
12	Total adjustment	-	*	*	-	-	*	-	*

*represents amounts less than S\$0.5 million.

5 COMPOSITION OF CAPITAL

5.1 Reconciliation of Regulatory Capital to Balance Sheet

The table below provides the link between MSL's balance sheet in the financial statement and the composition of capital disclosure template.

SGD million	Amount	Cross Reference to Section 5.2
Assets		
Cash and balance with a central bank	1,144	
Singapore Government securities and treasury bills	4,582	
Debt securities	130	
Balances and placements with and loans to banks	5,563	
Bills receivable	29	
Loans and advances to non-bank customers	21,966	
of which: Total allowances admitted as eligible T2 capital	42	a
Amount due from related corporations	3,772	
Other assets	399	
Intangible assets	101	
Right-of-use assets	52	
Property, plant and equipment	18	
Total Assets	37,756	
Liabilities		
Deposits and balances of banks	100	
Deposits of non-bank customers	34,649	
Bills payable	60	
Amount due to related corporations	5	
Current tax payable	40	
Other liabilities	300	
Lease liabilities	51	
Deferred tax liabilities	11	
Total Liabilities	35,216	
Net Asset	2,540	
Equity		
Share capital and other capital	2,400	
of which: Amount eligible as CET1 Capital	2,400	b
Total Reserve	140	
of which: Retained earnings	137	c
of which: Fair Value Reserve	3	d
Total Equity	2,540	

5.2 Composition of Regulatory Capital

The following table provides a breakdown of the constituent components of regulatory capital and the corresponding regulatory adjustments.

SGD million		Amount	Cross Reference to Section 5.1
Common Equity Tier 1 capital: instruments and reserves			
1	Paid-up ordinary shares and share premium (if applicable)	2,400	b
2	Retained earnings	137	c
3 [#]	Accumulated other comprehensive income and other disclosed reserves	3	d
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)		
5	Minority interest that meets criteria for inclusion	-	
6	Common Equity Tier 1 capital before regulatory adjustments	2,540	
Common Equity Tier 1 capital: regulatory adjustments			
7	Valuation adjustment pursuant to Part VIII of MAS Notice 637	-	
8	Goodwill, net of associated deferred tax liability	-	
9 [#]	Intangible assets, net of associated deferred tax liability	-	
10 [#]	Deferred tax assets that rely on future profitability	-	
11	Cash flow hedge reserve	-	
12	Shortfall of TEP relative to EL under IRBA	23	
13	Increase in equity capital resulting from securitisation transactions	-	
14	Unrealised fair value gains/losses on financial liabilities and derivative liabilities arising from changes in own credit risk	-	
15	Defined benefit pension fund assets, net of associated deferred tax liability	-	
16	Investments in own shares	-	
17	Reciprocal cross-holdings in ordinary shares of financial institutions	-	
18	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
19	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries) (amount above 10% threshold)	-	
20 [#]	Mortgage servicing rights (amount above 10% threshold)		
21 [#]	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of associated deferred tax liability)		
22	Amount exceeding the 15% threshold	-	
23	of which: investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
24 [#]	of which: mortgage servicing rights		
25 [#]	of which: deferred tax assets arising from temporary differences		
26	National specific regulatory adjustments	-	

SGD million		Amount	Cross Reference to Section 5.1
26A	PE/VC investments held beyond the relevant holding periods set out in MAS Notice 630	-	
26B	Capital deficits in subsidiaries and associates that are regulated financial institutions	-	
26C	Any other items which the Authority may specify	-	
27	Regulatory adjustments applied in calculation of CET1 Capital due to insufficient AT1 Capital to satisfy required deductions	-	
28	Total regulatory adjustments to CET1 Capital	23	
29	Common Equity Tier 1 capital (CET1)	2,517	
Additional Tier 1 capital: instruments			
30	AT1 capital instruments and share premium (if applicable)	-	
31	of which: classified as equity under the Accounting Standards	-	
32	of which: classified as liabilities under the Accounting Standards	-	
33	Transitional: Ineligible capital instruments (pursuant to paragraphs 6.5.3 and 6.5.4)	-	
34	AT1 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	-	
35	of which: instruments issued by subsidiaries subject to phase out	-	
36	Additional Tier 1 capital before regulatory adjustments	-	
Additional Tier 1 capital: regulatory adjustments			
37	Investments in own AT1 capital instruments	-	
38	Reciprocal cross-holdings in AT1 capital instruments of financial institutions	-	
39	Investments in AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
40	Investments in AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
41	National specific regulatory adjustments which the Authority may specify	-	
42	Regulatory adjustments applied in calculation of AT1 Capital due to insufficient Tier 2 Capital to satisfy required deductions	-	
43	Total regulatory adjustments to Additional Tier 1 capital	-	
44	Additional Tier 1 capital (AT1)	-	
45	Tier 1 capital (T1 = CET1 + AT1)	2,517	
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	-	
47	Transitional: Ineligible capital instruments (pursuant to paragraphs 6.5.3 and 6.5.4)	-	
48	Tier 2 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	-	
49	of which: instruments issued by subsidiaries subject to phase out	-	
50	Provisions	42	a

SGD million		Amount	Cross Reference to Section 5.1
51	Tier 2 capital before regulatory adjustments	42	
Tier 2 capital: regulatory adjustments			
52	Investments in own Tier 2 instruments	-	
53	Reciprocal cross-holdings in Tier 2 capital instruments of financial institutions	-	
54	Investments in Tier 2 capital instruments and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
54a [#]	Investments in other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake: amount previously designated for the 5% threshold but that no longer meets the conditions	-	
55	Investments in Tier 2 capital instruments and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
56	National specific regulatory adjustments which the Authority may specify	-	
57	Total regulatory adjustments to Tier 2 capital	-	
58	Tier 2 capital (T2)	42	
59	Total capital (TC = T1 + T2)	2,559	
60	Floor-adjusted total risk weighted assets	13,836	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	Common Equity Tier 1 CAR	18.2%	
62	Tier 1 CAR	18.2%	
63	Total CAR	18.5%	
64	Bank-specific buffer requirement	9.0%	
65	of which: capital conservation buffer requirement	2.5%	
66	of which: bank specific countercyclical buffer requirement	0.0%	
67	of which: G-SIB and/or D-SIB buffer requirement (if applicable)	-	
68	Common Equity Tier 1 available after meeting the Reporting Bank's minimum capital requirements	8.5%	
National minima			
69	Minimum CET1 CAR	6.5%	
70	Minimum Tier 1 CAR	8.0%	
71	Minimum Total CAR	10.0%	
Amounts below the thresholds for deduction (before risk weighting)			
72	Investments in ordinary shares, AT1 capital, Tier 2 capital and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
73	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
74	Mortgage servicing rights (net of associated deferred tax liability)		

SGD million		Amount	Cross Reference to Section 5.1
75	Deferred tax assets arising from temporary differences (net of associated deferred tax liability)		
Applicable caps on the inclusion of provisions in Tier 2			
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	42	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	70	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	-	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	39	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to phase out arrangements		
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)		
82	Current cap on AT1 instruments subject to phase out arrangements	-	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	-	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	
Items marked with a hash [#] are elements where a more conservative definition has been applied relative to those set out under the Basel III capital standards.			

5.3 Main Features of Regulatory Capital Instruments

The following table provides a description of the main features of the regulatory capital instruments under MSL that are recognised as regulatory capital pursuant to the requirements of MAS Notice 637 under Annex 11D.

1	Issuer	Maybank Singapore Limited
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	NA
3	Governing law(s) of the instrument	Singapore
4	Transitional Basel III rules	Common Equity Tier 1
5	Post-transitional Basel III rules	Common Equity Tier 1
6	Eligible at solo/group/group and solo	Group and Solo
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares
8	Amount recognised in regulatory capital (Currency in millions, as of most recent reporting date)	S\$2,400 million
9	Par value of instrument	NA
10	Accounting classification	Shareholder's Equity
11	Original date of issuance	05 November 2018
12	Perpetual or dated	Perpetual
13	Original maturity date	No maturity
14	Issuer call subject to prior supervisory approval	No
15	Optional call date, contingent call dates and redemption amount	NA
16	Subsequent call dates, if applicable	NA
	Coupons / dividends	
17	Fixed or floating dividend/coupon	NA
18	Coupon rate and any related index	NA
19	Existence of a dividend stopper	NA
20	Fully discretionary, partially discretionary or mandatory	Fully discretionary
21	Existence of step up or other incentive to redeem	NA
22	Noncumulative or cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	NA
25	If convertible, fully or partially	NA
26	If convertible, conversion rate	NA
27	If convertible, mandatory or optional conversion	NA
28	If convertible, specify instrument type convertible into	NA
29	If convertible, specify issuer of instrument it converts into	NA
30	Write-down feature	No
31	If write-down, write-down trigger(s)	NA
32	If write-down, full or partial	NA
33	If write-down, permanent or temporary	NA
34	If temporary write-down, description of write-up mechanism	NA

35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Represents the most subordinated claim upon occurrence of liquidation of the bank
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	NA

6 LEVERAGE RATIO

The leverage ratio has been introduced under the Basel III framework as a non-risk based backstop limit to supplement the risk-based capital requirements. Its primary aim is to constrain the build-up of excess leverage in the banking sector.

6.1 Leverage Ratio

SGD million	31 Dec 2019	30 Sep 2019
Capital and Total exposures		
Tier 1 Capital	2,517	2,381
Total Exposures	39,882	38,832
Leverage ratio (%)		
Leverage ratio	6.3	6.1

6.2 Leverage Ratio Summary Comparison Table

SGD million		Amount
	Item	31 Dec 2019
1	Total consolidated assets as per published financial statements	37,756
2	Adjustment for investments in entities that are consolidated for accounting purposes but are outside the regulatory scope of consolidation	-
3	Adjustment for fiduciary assets recognised on the balance sheet in accordance with the Accounting Standards but excluded from the calculation of the exposure measure	-
4	Adjustment for derivative transactions	50
5	Adjustment for SFTs	39
6	Adjustment for off-balance sheet items	2,060
7	Other adjustments	(23)
8	Exposure measure	39,882

6.3 Leverage Ratio Common Disclosure Template

The following table provides a detailed breakdown of the components of the leverage ratio denominator.

SGD million		Amount	
	Item	31 Dec 2019	30 Sep 2019
	Exposure measures of on-balance sheet items		
1	On-balance sheet items (excluding derivative transactions and SFTs, but including on-balance sheet collateral for derivative transactions or SFTs)	32,309	33,999
2	Asset amounts deducted in determining Tier 1 capital	(23)	(22)

SGD million		Amount	
	Item	31 Dec 2019	30 Sep 2019
3	Total exposure measures of on-balance sheet items (excluding derivative transactions and SFTs)	32,286	33,977
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	35	28
5	Potential future exposure associated with all derivative transactions	50	111
6	Gross-up for derivative collateral provided where deducted from the balance sheet assets in accordance with the Accounting Standards	-	-
7	Deductions of receivables for the cash portion of variation margins provided in derivative transactions	-	-
8	CCP leg of trade exposures excluded	-	-
9	Adjusted effective notional amount of written credit derivatives	-	-
10	Further adjustments in effective notional amounts and deductions from potential future exposures of written credit derivatives	-	-
11	Total derivative exposure measures	85	139
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	5,412	2,654
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	39	9
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	Total SFT exposure measures	5,451	2,663
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	10,051	10,215
18	Adjustments for calculation of exposure measures of off-balance sheet items	(7,991)	(8,162)
19	Total exposure measures of off-balance sheet items	2,060	2,053
	Capital and Total exposures		
20	Tier 1 capital	2,517	2,381
21	Total exposures	39,882	38,832
	Leverage ratio		
22	Leverage ratio	6.3%	6.1%

The bank's leverage ratio as at December 2019 has increased by 0.2 percentage point to 6.3% as compared to the previous quarter mainly due to higher capital. The ratio is well above the 3% regulatory minimum ratio prescribed by MAS, effective 1 January 2018.

7 RISK MANAGEMENT APPROACH

Risk management is a core discipline of MSL to ensure overall soundness of the bank. The management of risk in MSL broadly takes place at different hierarchical levels and is emphasised through various levels of committees, business lines, control and reporting functions.

Under the bank’s risk governance structure, the Board of Directors (“BOD”) has overall responsibility for the oversight of the risk management of MSL. The Board-level Risk Management and Compliance Committee (“RMCC”) assists the BOD to set the risk appetite and review the risk management frameworks, policies, and credit underwriting standards to steer MSL in risk taking activities.

In addition to Board oversight, there are several Executive-level risk management committees - Singapore Management Committee (“SMC”), Executive Risk Management Committee (“ERC”), Credit Committee Singapore (“CCS”), Non-Financial Risk Committee (“NFRC”) and Asset and Liability Management Committee (“ALCO”) - to assist and support BOD and RMCC’s risk oversight.

Functions	Key Responsibilities
Board & Board-level Risk Management Committee	
Board of Directors	Ultimate governing body responsible for understanding the major risks faced by the bank, setting acceptable levels of risk taking and ensuring that Senior Management takes the steps necessary to identify, measure, control and monitor these risks.
Risk Management and Compliance Committee	Assist the BOD in the execution of its duties and responsibilities.
Executive-level Risk Management Committees	
Executive Risk Management Committee	Assist and support the RMCC in its operations.
Senior Management & Working / Operating Level Committees	
Senior Management & Working / Operating Level Committees	Ensure the management of risk is in line with the approved risk appetite and strategy, risk frameworks and policies, and risk management practices.

The bank adopts the Maybank Group’s risk frameworks and policies with further customisation to suit local regulatory and business environment. For more details on Maybank’s Risk Management Approach, please refer to [Maybank Group’s Annual Report](#) as follows:

Annual Report

Chapter	Details Covered
Risk Driver (page 24)	Risk drivers significant to the bank, principal risks to the bank.
Group Risk Management (page 60)	Strategies and processes to manage, hedge and mitigate risk.
Statement on Risk Management and Internal Control (page 88)	Risk management framework, risk appetite, risk culture, risk governance and risk information reporting processes.

Further details can be found in [Maybank Group's Pillar 3 disclosure](#):

Maybank Group's Pillar 3 Disclosure

Section	Details Covered
Internal Capital Adequacy Assessment Process (page 16)	Stress testing and risk measurements.
Risk Management (page 18)	Risk management, risk appetite and risk governance and oversight.

8 OVERVIEW OF RISK-WEIGHTED ASSETS

The following table presents the bank's risk weighted assets ("RWA") by approaches and risk types, as prescribed under MAS Notice 637. The minimum capital requirement is expressed as 10% of RWA. The bank's RWA comprises Credit RWA, Operational RWA and Market RWA. The quarter-on-quarter decrease in credit RWA was largely contributed by a drop in intercompany exposures and corporate exposures.

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2019	30 Sep 2019	31 Dec 2019
1	Credit risk (excluding CCR)	12,467	13,098	1,247
2	of which: Standardised Approach	5,541	5,891	554
3	of which: F-IRBA	4,349	4,606	435
4	of which: supervisory slotting approach	-	-	-
5	of which: A-IRBA	2,577	2,602	258
6	CCR	79	118	8
7	of which: Current Exposure Method	46	95	5
8	of which: CCR internal models method	-	-	-
9	of which: other CCR	32	24	3
9a	of which: CCP	-	-	-
10	CVA	24	60	2
11	Equity exposures under the simple risk weight method	-	-	-
11a	Equity exposures under the IMM	-	-	-
12	Equity investments in funds - look-through approach	-	-	-
13	Equity investments in funds - mandate-based approach	-	-	-
14	Equity investments in funds - fall back approach	-	-	-
14a	Equity investments in funds - partial use of an approach	-	-	-
15	Unsettled transactions	-	-	-
16	Securitisation exposures in the banking book	-	-	-
17	of which: SEC-IRBA	-	-	-
18	of which: SEC-ERBA, including IAA	-	-	-
19	of which: SEC-SA	-	-	-
20	Market risk	5	7	1
21	of which: SA(MR)	5	7	1
22	of which: IMA	-	-	-
23	Operational risk	1,262	1,266	126
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	-	-	-

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2019	30 Sep 2019	31 Dec 2019
25	Floor adjustment	-	-	-
26	Total	13,836	14,549	1,384

9 GENERAL QUALITATIVE DISCLOSURES ON CREDIT RISK

Credit risk is the risk of loss of principal or income arising from the failure of a borrower or counterparty to perform their contractual obligations in accordance with agreed terms.

The bank's credit risk management is supported by policies which cover credit risk management process in accordance with the standards established by the Maybank Group in order to manage credit risk in a structured, systematic and consistent manner. Credit policies are supplemented by operational procedures and guidelines to ensure consistency in identifying, assessing, underwriting, measuring, reporting and controlling credit risk.

Monitoring of credit exposures, portfolio performance and external environment factors potentially affecting the bank is part of the bank's efforts in managing credit risk. Relevant reports on exposures, performance and external credit trends are submitted to the relevant risk committees periodically.

The Credit Authority Limits ("AL") Policy governs the administration of the authority limits for various areas including credit extension, renewals and NPL management. The AL Policy adopts a risk-based approach taking into consideration the risk rating and total credit exposures of the borrower.

The bank engages in various types of credit stress testing typically driven by regulators or internal requirements. The RMCC, ERC and Senior Management exercise effective oversight on the stress test process and results to ensure that the requirements set out within the relevant policies are met.

10 CREDIT QUALITY OF ASSETS

The following table provides an overview of the credit quality of the bank's on- and off- balance sheet assets.

SGD million		(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Gross carrying amount of		Allowances and impairments	of which: allowances for standardised approach exposures		of which: allowances for IRBA exposures	Net values (a+b-c)
		Defaulted exposures	Non-defaulted exposures		of which: specific allowances	of which: general allowances		
1	Loans	180	21,962	147	22	26	99	21,995
2	Debt securities	-	4,712	*	-	*	-	4,712
3	Off-balance sheet exposures	1	8,286	1	-	*	*	8,286
4	Total	181	34,960	148	22	26	100	34,993

*Number is less than 0.5

A default by the obligor is deemed to have occurred when the obligor is assessed to be unlikely to pay its credit obligations in full or the obligor is past due for more than 90 days on its credit obligations to the bank.

11 CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES

SGD million		(a)
		31 Dec 2019
1	Defaulted loans and debt securities at end of the previous semi-annual reporting period	179
2	Loans and debt securities that have defaulted since the previous semi-annual reporting period	70
3	Returned to non-defaulted status	25
4	Amounts written-off	31
5	Other changes	(13)
6	Defaulted loans and debt securities at end of the semi-annual reporting period (1+2-3-4±5)	180

12 ADDITIONAL DISCLOSURES RELATED TO THE CREDIT QUALITY OF ASSETS

The bank's Core Credit Classification and Impairment Policy sets out the bank's standards on classification and impairment provisions for financing in accordance with the Group policy and MAS Notice 612 - Credit Files, Grading and Provisioning. Where country requirements differ from the Group, the more stringent policy shall apply.

Credit exposures are categorised as "Performing Loans" and "Non-Performing Impaired Loans". Classification of accounts leads to the required action on distressed accounts / borrowers where the bank can allocate the right amount of focus for early, preventive and remedial actions.

Loans / financing are classified as follows:

Classification	Description
Performing Loans	
Pass	This indicates that timely repayment of the outstanding credit facility is not in doubt. Repayment is prompt and the credit facility does not exhibit any potential weakness in repayment capability, business, cash flow or financial position of the borrower. The credit facilities may be further sub-categorised to Early Warning Signal ("EWS") and Watch List ("WL") for early care and account management purposes.
Special Mention Account ("SMA")	Accounts exhibiting potential weaknesses that, if not corrected in a timely manner, may adversely affect repayment by the borrower at a future date, and warrant close attention by a bank.
Non-Performing Impaired Loans ("NPIL")	
Substandard	Accounts exhibiting definable weaknesses, in respect of either the business, cash flow or financial position of the borrower that may jeopardise repayment on existing terms.
Doubtful	Accounts with more severe weakness than those in a substandard credit facility such that the prospects of full recovery are questionable and the prospects of a loss are high, but the exact amount remains undeterminable yet.
Bad (Loss)	Accounts where the outstanding credit facility is not collectable and little or nothing can be done to recover the outstanding amount from any collateral or from the borrower's assets generally.

Accounts are classified as NPIL under the following circumstances:

- Time Trigger - Borrowers that are past due for more than 90 days on their obligations to the bank.

- Judgemental Trigger - Borrowers that exhibit definable or more severe weakness and are unlikely to pay their obligations to the bank.

The following tables show the breakdown of credit risk exposures by geographical areas, industry and residual maturity.

12.1 Breakdown of Major Types of Credit Risk Exposures by Geographical Areas

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Singapore Government securities & treasury bills	Debt securities	Balances and placements with and loans to banks	Bills Receivable & Loans and advances to non-bank customers	Credit commitments	Contingent liabilities	Total
Singapore	4,582	130	9,192	21,450	7,367	191	42,911
India	-	-	-	11	*	21	32
Malaysia	-	-	-	187	227	10	424
China	-	-	-	230	45	10	284
Hong Kong	-	-	3	52	8	20	84
Others	-	-	142	212	136	100	591
Total	4,582	130	9,337	22,143	7,783	352	44,326

*Number is less than 0.5

12.2 Breakdown of Major Types of Credit Risk Exposures by Industry Sector

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Singapore Government securities & treasury bills	Debt securities	Balances and placements with and loans to banks	Bills Receivable & Loans and advances to non-bank customers	Credit commitments	Contingent liabilities	Total
Building and Construction	-	-	-	1,359	444	50	1,852
Financial institutions	-	-	9,337	1,174	588	7	11,106
Manufacturing	-	-	-	671	266	33	970
Transport, storage & communication	-	-	-	501	125	25	651
Government & public sector	4,582	130	-	-	-	-	4,712
Housing & bridging loans	-	-	-	10,593	-	-	10,593
General commerce	-	-	-	1,608	1,109	206	2,924
Professional and private individuals	-	-	-	5,416	4,961	7	10,384
Others	-	-	-	820	289	23	1,132
Total	4,582	130	9,337	22,143	7,783	352	44,326

12.3 Breakdown of Major Types of Credit Risk Exposures by Residual Maturity

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Up to 7 days	More than 7 days to 1 month	More than 1 to 3 months	More than 3 to 12 months	More than 1 to 3 years	More than 3 years	Total
Singapore Government treasury bills and securities	100	1,068	1,695	1,358	104	256	4,582
Debt securities	-	-	-	-	-	130	130
Balances and placements with and loans to banks	2,365	3,245	527	3,200	-	-	9,337
Bills Receivable & Loans and advances to non-bank customers	1,143	635	433	594	1,253	18,085	22,143
Total	3,607	4,948	2,655	5,152	1,358	18,471	36,191

The bank's off-balance sheet credit exposures are largely short term commitments with maturity of less than 1 year.

The following tables show the breakdown of impaired exposures and related allowances and write-offs by geographical areas and industry.

12.4 Breakdown by Geographical Areas

SGD million	(a)	(b)	(c)
	Impaired loans, advances and financing	Specific Allowance	Write-Offs
Singapore	173	56	91
Malaysia	7	*	*
Others	*	*	*
Total	180	56	91

*Number is less than 0.5

12.5 Breakdown by Industry

SGD million	(a)	(b)	(c)
	Impaired loans, advances and financing	Specific Allowance	Write-Offs
Building and Construction	38	12	3
Financial institutions	*	*	*
Manufacturing	11	4	40
Transport, storage & communication	3	1	2
Housing & bridging loans	65	4	-
General commerce	28	20	22
Professional and private individuals	26	11	22
Others	10	4	3
Total	180	56	91

*Number is less than 0.5

The following table shows the ageing analysis of past due exposures.

12.6 Ageing Analysis of Past Due Loan Exposures

SGD million	(a)
	31 Dec 2019
Within 30 days	332
More than 30 to 90 days	72
More than 90 days	180
Total	584

12.7 Restructured Exposures

A restructured facility is one whose principal terms and conditions have been modified due to an increase in the credit risk / deterioration in creditworthiness of the customer and / or to assist the borrower to overcome / alleviate financial difficulties. Restructured accounts are classified as impaired, i.e. minimum “substandard” grade, depending on the financial condition of the borrower and the ability of the borrower to repay based on the restructured terms.

SGD million	(a)
	31 Dec 2019
Impaired	8
Non-impaired	28
Total	36

13 QUALITATIVE DISCLOSURES RELATED TO CRM TECHNIQUES

The bank may use various risk mitigation methods such as collateral, netting arrangements, credit insurance and guarantees to mitigate potential credit losses. When assessing whether a collateral is acceptable, the bank sets criteria including legal certainty and enforceability, marketability and valuations of the collateral.

The bank's Collateral Policy prescribes the list of acceptable collateral, valuation method and frequency, loan-to-value ("LTV") in order to be recognised as secured, insurance requirements etc.

Derivatives, repurchase agreements ("REPO"), etc. are typically governed and documented under market-standard documentation, such as International Swaps & Derivatives Association ("ISDA") Agreements and Master Repurchase Agreements. The master agreement provides general terms and conditions that are applied to all transactions which it governs.

Regular valuation of collateral is performed and the bank performs regular analysis of its collateral concentration. Collateral values are also adjusted during stress testing to ascertain the impact on recovery and loss.

Where necessary, recovery processes are in place to assist with the disposal of collateral. A panel of service providers (valuers, auctioneers, agents, brokers and solicitors) is maintained to assist the bank with the disposal of foreclosed properties / assets under impaired loans.

14 OVERVIEW OF CRM TECHNIQUES

The following table provides information on the extent of usage of Credit Risk Mitigation (“CRM”) techniques.

SGD million		(a)	(b)	(c)	(d)	(e)
		Exposures unsecured	Exposures secured ⁴	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	5,023	16,972	16,960	12	-
2	Debt securities	4,712	-	-	-	-
3	Total	9,735	16,972	16,960	12	-
4	Of which: defaulted	29	96	96	0	-

⁴ This refers to carrying amount of exposures which have at least one credit risk mitigation mechanism, collateral or financial guarantees associated with them as per the requirements of credit risk mitigation techniques set out in MAS Notice 637.

15 QUALITATIVE DISCLOSURES ON THE USE OF EXTERNAL CREDIT RATINGS UNDER THE SA(CR)

Credit exposures to sovereigns and banks under the SA are risk-weighted using external ratings, subject to the regulatory prescribed risk weights by asset classes set out in MAS Notice 637. The approved External Credit Assessment Institutions (“ECAI”) are Fitch Ratings, Moody’s Investors Service, and Standard & Poor’s (“S&P”).

16 CREDIT RISK EXPOSURES UNDER STANDARDISED APPROACH

16.1 SA(CR) and SA(EQ) - Credit Risk Exposure and CRM Effects

The following table provides an overview of the effects of CRM on the calculation of the bank's capital requirements for SA(CR).

SGD million		(a)	(b)	(c)	(d)	(e)	(f)
		Exposures before CCF and CRM		Exposures post-CCF and post-CRM		RWA and RWA density	
Asset Classes and others		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
1	Cash items	64	-	64	-	-	-
2	Central government and central bank	5,702	150	5,702	150	-	-
3	PSE	131	-	131	-	-	-
4	MDB	-	-	-	-	-	-
5	Bank	4,007	5	4,007	5	1,789	45%
6	Corporate	332	466	314	18	332	100%
7	Regulatory retail	2,222	2,237	2,153	103	1,692	75%
8	Residential mortgage	294	90	294	29	118	37%
9	CRE	1,028	79	1,025	26	1,051	100%
10	Equity - SA(EQ)	-	-	-	-	-	-
11	Past due exposures	26	4	26	*	33	129%
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	569	523	473	54	526	100%
14	Total	14,374	3,554	14,187	385	5,541	38%

*Number is less than 0.5

16.2 SA(CR) and SA(EQ) - Exposures by Asset Classes and Risk Weights

The following table presents the breakdown of credit risk exposures under the SA(CR) by asset class and risk weight.

SGD million		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposure amount (post-CCF and post-CRM)
Asset Classes and others											
1	Cash items	64	-	-	-	-	-	-	-	-	64
2	Central government and central bank	5,852	-	-	-	-	-	-	-	-	5,852
3	PSE	131	-	-	-	-	-	-	-	-	131
4	MDB	-	-	-	-	-	-	-	-	-	-
5	Bank	-	-	735	-	3,272	-	6	-	-	4,012
6	Corporate	-	-	-	-	-	-	332	-	-	332
7	Regulatory retail	-	-	-	-	-	2,256	-	-	-	2,256
8	Residential mortgage	-	-	-	314	-	1	7	-	-	322
9	CRE	-	-	-	-	-	-	1,051	-	-	1,051
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	-	-
11	Past due exposures	-	-	-	-	-	-	11	15	-	26
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	526	-	-	526
14	Total	6,046	-	735	314	3,272	2,257	1,933	15	-	14,572

17 QUALITATIVE DISCLOSURES FOR IRBA MODELS

The bank has obtained approval from MAS to use internal credit models for evaluating the majority of its credit risk exposures. For the RWA computation of corporate portfolios, the bank adopts the Foundation Internal Ratings-Based (“FIRB”) Approach (for approved scorecards), which relies on its own internal Probability of Default (“PD”) estimates and applies supervisory estimates of Loss Given Default (“LGD”) and Exposure At Default (“EAD”), while the retail portfolios mainly adopt the Advanced Internal Ratings-Based (“AIRB”) Approach relying on internal estimates of PD, LGD and EAD.

In line with Basel II requirements for capital adequacy purposes, the parameters are calibrated to a full economic cycle experience to reflect the long-run, cycle-neutral estimations.

- **Probability of Default**

PD represents the probability of a borrower defaulting within the next 12 months. The first level of estimation is based on the portfolio’s Observed Default Rate of recent years’ data. The average long-run default experience covering crisis periods (e.g. 2001-2002) is reflected through the Central Tendency calibration for the Basel estimated PD.

- **Loss Given Default**

LGD measures the economic loss the bank would incur in the event of a borrower defaulting. Among others, it takes into account post default pathways, cure probability, direct and indirect costs associated with the workout, recoveries from borrower and collateral liquidation.

For Basel II purpose, LGD is calibrated to loss experiences during a period of economic crisis whereby for most portfolios, the estimated loss during crisis years is expected to be higher than that during a normal economic period. The crisis period LGD, known as Downturn LGD, is used as an input for RWA calculation.

- **Exposure At Default**

EAD is linked to facility risk, namely the expected gross exposure of a facility should a borrower default. The “race-to-default” is captured by Credit Conversion Factor (“CCF”), which should reflect the expected increase in exposure amount due to additional drawdown by a borrower facing financial difficulties leading to default.

17.1 Application of Internal Ratings

Internal ratings are used in the following areas:

- **Credit Approval**

The bank adopts a risk-based approval approach where the approval level of a loan application is determined based on the internal rating of the borrower, Expected Loss (“EL”) and the quantum of exposure being requested.

- **Risk Management and Setting of Risk Tolerances For Credit Portfolios**

Internal ratings are used extensively in the bank’s policies to ensure consistent application of the rating systems, estimates and processes among the various units in the bank. For example, borrowers with higher risk grades are subject to more frequent reviews to ensure close monitoring and tracking.

Reports on the risk rating portfolio distribution and sectoral outlook versus borrower risk profile within each sector are produced regularly and monitored by the bank.

- **Internal Capital Allocation and Pricing**

The bank has emplaced risk-based capital management, through the Internal Capital Adequacy Assessment Process (“ICAAP”), and uses regulatory capital charge for decision making and budgeting. Internal ratings are being used as a basis for pricing credit facilities.

- **Provisioning**

The bank adopts the internal ratings generated to derive Expected Credit Loss (“ECL”) for provisioning purposes.

- **Corporate Governance**

Internal ratings, default and loss estimates are used in reports to provide meaningful analysis on areas relating to credit and profitability at all levels within the bank. This analysis is especially useful for senior management.

17.2 Non-Retail Portfolio

Non-retail exposures comprise mainly the bank’s commercial banking borrowers. The general approach adopted by the bank can be categorised into the following two categories:

- **Default History Based (“Good-Bad” Analysis)**
 This approach is adopted when the bank has sufficient default data. Under this approach, a statistical method is employed to determine the likelihood of default on existing exposures. Scorecards under the bank’s Credit Risk Rating System (“CRRS”) models were developed using this approach.

- **Expert Judgement Approach**
 The default experience for some exposures, for example in real estate, is insufficient for the bank to perform the required analysis to develop a robust statistical model. Hence, another approach known as experts’ judgement approach is opted to develop the scorecard. Under this approach, the qualitative, quantitative and factor weights are determined by the Group’s credit experts.

17.3 Credit Risk Models and Tools

- **Credit Risk Rating System (“CRRS”)**
 The Borrower Risk Rating (“BRR”), which is a component of CRRS, is a borrower-specific rating element that provides an estimate of the likelihood of the borrower going into default over the next 12 months. The BRR estimates the borrower risk and is independent of the type or nature of facilities and collateral offered.

For reference, each grade can be mapped to a set of external agency ratings, such as the S&P. This is illustrated in Table 1 below which contains the mapping of internal rating grades of corporate borrowers and S&P’s rating grades.

Table 1: Rating Grades

Risk Category	Rating Grade	S&P Equivalent
Very Low	1-5	AAA to BBB+
Low	6-10	BBB+ to BB+
Medium	11-15	BB+ to B+
High	16-21	B+ to C

17.4 Retail Portfolio

The bank has adopted the AIRB Approach for our retail exposures, which consist of residential mortgages, qualifying revolving retail exposures and other retail exposures. These exposures are managed on a portfolio basis premised on homogenous risk characteristics.

This approach calls for a more extensive reliance on the bank's own internal experience (based on historical data) by estimating all three main components of RWA calculation, namely PD, EAD and LGD which are based on historical data.

18 CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

The following table provides the main parameters used for the calculation of capital requirements for credit exposures under Foundation IRBA.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	EL	TEP
PD Range	(SGD million)		(%)	(SGD million)	(%)	(Count)	(%)	(Years)	(SGD million)	(%)	(SGD million)	
Corporate												
0.00 to < 0.15	51	155	20%	82	0.11%	74	39%	2.2	20	25%	*	
0.15 to < 0.25	47	66	11%	54	0.20%	54	39%	2.1	19	35%	*	
0.25 to < 0.50	549	474	16%	625	0.34%	198	41%	3.2	380	61%	1	
0.50 to < 0.75	355	270	15%	395	0.54%	135	40%	2.9	281	71%	1	
0.75 to < 2.50	1,174	787	22%	1,350	1.48%	438	41%	3.3	1,400	104%	8	
2.50 to < 10.00	308	203	19%	345	3.84%	177	39%	3.1	436	126%	5	
10.00 to < 100.00	133	205	18%	170	12.63%	390	40%	3.2	337	199%	8	
100.00 (Default)	50	68	*%	51	100.00%	45	42%	2.0	-	-	21	
Sub-total	2,668	2,226	18%	3,071	3.57%	1,511	40%	3.1	2,873	94%	45	50
Corporate Small Business												
0.00 to < 0.15	57	108	8%	66	0.10%	51	38%	3.7	17	25%	*	
0.15 to < 0.25	22	46	12%	27	0.20%	29	38%	2.5	8	30%	*	
0.25 to < 0.50	291	148	14%	311	0.36%	94	42%	3.6	229	74%	*	
0.50 to < 0.75	167	60	9%	173	0.55%	63	40%	3.3	114	66%	*	
0.75 to < 2.50	543	524	24%	667	1.40%	194	41%	3.5	615	92%	4	
2.50 to < 10.00	178	83	20%	194	4.71%	65	40%	2.9	241	124%	4	
10.00 to < 100.00	3	8	-	3	11.30%	5	45%	1.1	5	148%	*	
100.00 (Default)	5	1	-	5	100.00%	2	39%	1.6	-	-	2	
Sub-total	1,265	978	19%	1,446	1.77%	503	41%	3.4	1,230	85%	10	13
Total (all portfolios)	3,932	3,204	18%	4,517	3.00%	2,014	41%	3.2	4,103	91%	55	63

*Number is less than 0.5

The following table provides the main parameters used for the calculation of capital requirements for credit exposures under Advanced IRBA.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	EL	TEP
PD Range	(SGD million)		(%)	(SGD million)	(%)	(Count)	(%)	(Years)	(SGD million)	(%)	(SGD million)	
Residential Mortgage												
0.00 to < 0.15	29	17	100%	46	0.13%	90	13%		2	4%	*	
0.15 to < 0.25	2,402	86	100%	2,488	0.21%	6,611	13%		136	5%	1	
0.25 to < 0.50	4,823	268	100%	5,092	0.37%	8,509	13%		407	8%	2	
0.50 to < 0.75	2,837	326	100%	3,164	0.57%	4,164	13%		349	11%	2	
0.75 to < 2.50	504	174	100%	679	1.40%	1,251	13%		134	20%	1	
2.50 to < 10.00	419	99	100%	517	3.90%	757	13%		188	36%	3	
10.00 to < 100.00	57	*	100%	57	12.51%	139	13%		36	63%	1	
100.00 (Default)	70	-	-	70	100.00%	128	18%		87	125%	5	
Sub-total	11,142	971	100%	12,113	1.23%	21,649	13%		1,338	11%	16	6
Qualifying Revolving Retail												
0.00 to < 0.15	-	*	60%	*	0.15%	2	90%		*	7%	*	
0.15 to < 0.25	*	18	66%	12	0.21%	768	90%		1	10%	*	
0.25 to < 0.50	101	938	68%	735	0.37%	87,809	90%		117	16%	2	
0.50 to < 0.75	58	383	68%	318	0.61%	35,624	90%		75	23%	2	
0.75 to < 2.50	157	743	68%	663	1.21%	70,347	90%		260	39%	7	
2.50 to < 10.00	50	198	68%	185	4.87%	20,635	90%		193	105%	8	
10.00 to < 100.00	21	21	71%	36	18.89%	3,379	90%		72	203%	6	
100.00 (Default)	7	2	100%	9	100.00%	715	90%		11	125%	7	
Sub-total	394	2,303	68%	1,958	1.91%	219,279	90%		729	37%	33	29

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	EL	TEP
PD Range	(SGD million)		(%)	(SGD million)	(%)	(Count)	(%)	(Years)	(SGD million)	(%)	(SGD million)	
Other Retail												
0.00 to < 0.15	1,360	-	-	1,360	0.09%	34,197	35%		108	8%	*	
0.15 to < 0.25	455	*	-	455	0.18%	10,790	35%		60	13%	*	
0.25 to < 0.50	321	8	71%	327	0.35%	7,494	36%		67	21%	*	
0.50 to < 0.75	96	3	74%	99	0.60%	2,098	36%		28	28%	*	
0.75 to < 2.50	157	5	76%	161	1.39%	3,529	37%		67	42%	1	
2.50 to < 10.00	37	3	77%	39	4.20%	802	43%		24	62%	1	
10.00 to < 100.00	5	*	100%	6	19.80%	159	42%		5	89%	*	
100.00 (Default)	2	-	-	2	100.00%	61	58%		5	239%	1	
Sub-total	2,434	19	73%	2,448	0.44%	59,130	35%		364	15%	4	2
Total (all portfolios)	13,970	3,293	77%	16,519	1.16%	300,058	25%		2,431	15%	53	37

*Number is less than 0.5

19 EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM

The bank does not recognise credit derivatives as a credit risk mitigant under the F-IRBA or A-IRBA.

20 IRBA - RWA FLOW STATEMENT FOR CREDIT RISK EXPOSURES

The table below presents the drivers of movement in Credit RWA under IRBA for the quarter.

The bank's RWAs decreased by S\$280 million quarter-on-quarter mainly driven by a decrease in asset size for corporate exposures.

SGD million		(a)
		RWA amounts
1	RWA as at end of previous quarter	7,208
2	Asset size	(311)
3	Asset quality	36
4	Model updates	-
5	Methodology and policy	-
6	Acquisitions and disposals	-
7	Foreign exchange movements	(6)
8	Other	-
9	RWA as at end of quarter	6,927

21 IRBA - BACKTESTING OF PD PER PORTFOLIO

The following table provides backtesting data to validate the reliability of PD calculations, and compares the PD used in F-IRBA capital calculations with the effective default rates of the bank's obligors.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
PD Range	S&P	Fitch's Rating	Moody's Rating	Weighted Average PD by obligors	Arithmetic average PD by obligors	Number of obligors		Defaulted obligors in the annual reporting period	of which: raw defaulted obligors in the annual reporting period	Average historical annual default rate
						End of previous annual reporting period	End of the annual reporting period			
Corporate asset sub-class and Corporate small business asset sub-class										
0.00 to < 0.15	AAA to A	AAA to A	Aaa to A2	0.11%	0.12%	132	125			0.10%
0.15 to < 0.25	A-	A-	A3	0.20%	0.20%	90	83			0.65%
0.25 to < 0.50	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.34%	0.34%	327	292	2		0.77%
0.50 to < 0.75	BBB-	BBB-	Baa3	0.55%	0.55%	218	198	3	1	0.91%
0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.45%	1.39%	658	632	8		1.20%
2.50 to < 10.00	B to CCC	B to CCC	B2 to Caa2	4.16%	4.11%	240	242	10		4.55%
10.00 to < 100.00	CCC- to C	CCC- to C	Caa3 to Ca	12.61%	13.64%	425	393	9	3	4.69%

The following table provides backtesting data to validate the reliability of PD calculations, and compares the PD used in A-IRBA capital calculations with the effective default rates of the bank's obligors.

(a) PD Range	(b) S&P	(c) Fitch's Rating	(d) Moody's Rating	(e) Weighted Average PD by obligors	(f) Arithmetic average PD by obligors	(g) (h) Number of obligors		(i) Defaulted obligors in the annual reporting period	(j) of which: raw defaulted obligors in the annual reporting period	(k) Average historical annual default rate
						End of previous annual reporting period	End of the annual reporting period			
Residential mortgage asset sub-class										
0.00 to < 0.15				0.13%	0.13%	154	90			-
0.15 to < 0.25				0.21%	0.21%	6,671	6,611	5		0.06%
0.25 to < 0.50				0.37%	0.36%	8,696	8,509	12		0.09%
0.50 to < 0.75				0.57%	0.57%	4,827	4,164	4		0.10%
0.75 to < 2.50				1.40%	1.40%	1,563	1,251	5		0.46%
2.50 to < 10.00				3.90%	4.06%	779	757	10		1.85%
10.00 to < 100.00				12.51%	12.77%	162	139	23		17.34%
QRRE asset sub-class										
0.00 to < 0.15				0.15%	0.15%	1	2			-
0.15 to < 0.25				0.21%	0.21%	977	768			0.19%
0.25 to < 0.50				0.37%	0.37%	104,766	87,809	104	1	0.49%
0.50 to < 0.75				0.61%	0.61%	42,116	35,624	338		2.62%
0.75 to < 2.50				1.21%	1.21%	73,258	70,347	393	7	2.39%
2.50 to < 10.00				4.87%	4.83%	13,312	20,635	231		3.93%
10.00 to < 100.00				18.89%	18.55%	3,093	3,379	456	23	9.29%
Other retail exposures asset sub-class										
0.00 to < 0.15				0.09%	0.09%	31,097	34,316	30	1	0.05%
0.15 to < 0.25				0.18%	0.18%	9,459	10,799	13		0.08%
0.25 to < 0.50				0.35%	0.35%	8,538	7,514	23	1	0.16%
0.50 to < 0.75				0.60%	0.60%	2,622	2,100	8		0.23%

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
PD Range	S&P	Fitch's Rating	Moody's Rating	Weighted Average PD by obligors	Arithmetic average PD by obligors	Number of obligors		Defaulted obligors in the annual reporting period	of which: raw defaulted obligors in the annual reporting period	Average historical annual default rate
						End of previous annual reporting period	End of the annual reporting period			
0.75 to < 2.50				1.39%	1.42%	3,861	3,535	20		0.47%
2.50 to < 10.00				4.20%	4.20%	985	806	18	1	2.16%
10.00 to < 100.00				19.80%	19.59%	207	160	30		7.49%

22 SPECIALISED LENDING AND EQUITIES UNDER THE SIMPLE RISK WEIGHT METHOD

The bank does not have specialised lending or equities exposures under the Simple Risk Weight Method.

23 QUALITATIVE DISCLOSURES RELATED TO CCR

Counterparty Credit Risk (“CCR”) [i.e. Pre-Settlement Risk (“PSR”)] is the risk that the counterparty in a trade will default before the settlement date, thereby prematurely ending the contract.

Replacement cost (i.e. the potential cost of replacing a transaction in conditions that are less favourable than those achieved in the original transaction) arises from fluctuations in the market price and when there is a need to complete the exchange and enter into a new contract with a different counterparty. This risk is applicable to treasury-related products.

The bank’s Non-Bank Institutional Counterparty Policy for Treasury (“NBIC”) sets out the requirements for treasury products, namely foreign exchange, derivatives, bond trading and REPO / reverse REPO.

The extension of credit limits and exposures to counterparties are subject to the bank’s prevailing underwriting standards and credit policies. Similar to other credit applications, counterparties are assigned the appropriate risk ratings in accordance with the bank’s Credit Rating Policy and the applications are subject to independent credit assessments by Credit Management Singapore (“CMS”). The setting of limits and tenor is also subject to additional criteria as set out within the NBIC policy.

The bank actively monitors and manages the limits to ensure compliance to internal and regulatory requirements on single largest counterparty. The bank also takes the necessary actions and reports on counterparties experiencing issues with excess management and settlement failure.

24 ANALYSIS OF CCR BY APPROACH

The following table presents the methods used to calculate Counterparty Credit Risk regulatory requirements and the main parameters used within each method.

SGD million		(a)	(b)	(c)	(d)	(e)	(f)
		Replacement cost	Potential future exposure	Effective EPE	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	Current Exposure Method (for derivatives)	24	50			74	46
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					162	32
5	VaR for SFTs					-	-
6	Total						79

25 CVA RISK CAPITAL REQUIREMENTS

The following table provides an overview of the bank's Credit Valuation Adjustment ("CVA") risk capital requirements. The bank adopts the Standardised Method for CVA risk capital requirements.

SGD million		(a)	(b)
		EAD (post-CRM)	RWA
Total portfolios subject to the Advanced CVA capital requirement		-	-
1	(i) VaR component (including the three-times multiplier)		-
2	(ii) Stressed VaR component (including the three-times multiplier)		-
3	All portfolios subject to the Standardised CVA capital requirement	74	24
4	Total portfolios subject to the CVA risk capital requirement	74	24

26 CCR EXPOSURES BY PORTFOLIO AND RISK WEIGHTS

The following table provides a breakdown of the bank's CCR exposures calculated in accordance with the SA(CR), by asset class and risk weight.

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Risk weight	0%	10%	20%	50%	75%	100%	150%	Others	Total Credit exposure
Asset classes									
Central government and central bank	-	-	-	-	-	-	-	-	-
PSE	-	-	-	-	-	-	-	-	-
MDB	-	-	-	-	-	-	-	-	-
Bank	-	-	169	43	-	-	-	-	212
Corporate	-	-	-	-	-	*	-	-	*
Regulatory retail	-	-	-	-	*	-	-	-	*
Other exposures	-	-	-	-	-	22	-	-	22
Total	-	-	169	43	*	22	-	-	235

*Number is less than 0.5

27 CCR EXPOSURES BY PORTFOLIO AND RD RANGE

The following table provides the parameters used for the calculation of the bank's CCR capital requirements for IRBA models.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	EAD post-CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
PD Range	(SGD million)	(%)	(Count)	(%)	(Years)	(SGD million)	(%)
Corporate							
0.00 to < 0.15	*	0.07%	6	45%	1.00	*	14%
0.15 to < 0.25	*	0.20%	5	45%	1.00	*	30%
0.25 to < 0.50	*	0.32%	7	45%	1.00	*	40%
0.50 to < 0.75	*	0.55%	6	45%	1.00	*	55%
0.75 to < 2.50	1	0.92%	11	45%	1.00	*	69%
2.50 to < 10.00	*	3.27%	2	45%	1.00	*	113%
10.00 to < 100.00	*	11.30%	2	45%	1.00	*	185%
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	1	0.96%	39	45%	1.00	1	62%
Corporate Small Business							
0.00 to < 0.15	*	0.09%	3	45%	1.00	*	17%
0.15 to < 0.25	*	0.20%	3	45%	1.00	*	27%
0.25 to < 0.50	*	0.32%	6	45%	1.00	*	33%
0.50 to < 0.75	*	0.55%	5	45%	1.00	*	49%
0.75 to < 2.50	*	1.38%	7	45%	1.00	*	68%
2.50 to < 10.00	*	4.18%	4	45%	1.00	*	96%
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	1	0.72%	28	45%	1.00	*	47%
Total (sum of portfolios)	2	0.83%	67	45%	1.00	1	54%

*Number is less than 0.5

28 COMPOSITION OF COLLATERAL FOR CCR EXPOSURE

The following table provides a breakdown of all types of collateral posted or received by the bank to support or reduce the CCR exposures related to SFTs.

SGD million	(a)	(b)	(c)	(d)	(e)	(f)
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received	Fair value of collateral posted
Segregated	Unsegregated	Segregated	Unsegregated			
Cash - domestic currency	-	-	-	-	100	4,505
Cash - other currencies	-	-	-	-	-	907
Domestic sovereign debt	-	-	-	-	4,342	100
Other sovereign debt	-	-	-	-	267	-
Government agency debt	-	-	-	-	474	-
Corporate bonds	-	-	-	-	260	-
Equity securities	-	-	-	-	-	-
Other collateral	-	-	-	-	32	-
Total	-	-	-	-	5,473	5,512

29 CREDIT DERIVATIVE EXPOSURES

The bank does not have credit derivatives exposure as at 31 December 2019.

30 EXPOSURE TO CENTRAL COUNTERPARTIES

The bank does not have exposure to central counterparties as at 31 December 2019.

31 SECURITISATION

The bank does not have securitisation exposure as at 31 December 2019.

32 QUALITATIVE DISCLOSURES RELATED TO MARKET RISK

The bank does not have a trading book as of 31 December 2019.

33 MARKET RISK UNDER STANDARDISED APPROACH

The table below shows the capital requirement for each component under the SA for market risk.

The market risk RWA was driven by foreign exchange risk in the banking book.

SGD million		(a)
		RWA
	Products excluding options	
1	Interest rate risk (general and specific)	-
2	Equity risk (general and specific)	-
3	Foreign exchange risk	5
4	Commodity risk	-
	Options	
5	Simplified approach	-
6	Delta-plus method	-
7	Scenario approach	-
8	Securitisation	-
9	Total	5

34 OPERATIONAL RISK

Operational Risk is the risk of losses attributable from failed or inadequate internal processes, human or people-related factors, systems or from external events. This is inclusive of the risk of the failure to comply with applicable regulations, laws, ethics or policies internal to Maybank.

The Operational Risk Management Methodology in MSL is embedded within the Three Lines of Defence to support the identification, assessment, mitigation and recovery of operational risks. The Three Lines of Defence comprise the Business Risk Owners (First Line), Independent Risk Stewards including Risk Management, Legal, Compliance, IT Risk (Second Line), and Internal Audit (Third Line).

This Methodology sets the baseline of standards for a homogeneous application of identification, assessment, monitoring and reporting of risks. This transcends an even method of measurement and management of operational risks and ensures consistency in the application of the operational risk capital model.

The management of operational risk in the bank is also guided by the MSL Operational Risk Policy and its associated tools within the methodology, such as the Risk Control Self-Assessment (“RCSA”), Key Risk Indicators (“KRI”) and Incident Management Data Collection (“IMDC”). In addition, Operational Risk Management provides oversight and ongoing monitoring and review of all outsourcing arrangements of the bank. Operational Risk Management also governs the bank’s mitigation of risks through the Business Continuity Management programme to ensure the bank’s resilience in the event of a disaster.

The Non-Financial Risk Committee and Enterprise Risk Committee in MSL govern operational risk and meet on a quarterly and monthly basis (respectively) to discuss, manage and direct existing and emerging operational risk issues as part of its agenda.

MSL uses the Basic Indicator Approach for the calculation of its Operational Risk capital, as part of the computation method spelt out in MAS Notice 637, Part IX, Division 2.

35 INTEREST RATE RISK IN THE BANKING BOOK (“IRRBB”)

IRRBB is defined as the risk of loss in earnings or economic value on banking book exposures arising from movements in interest rates.

IRRBB in MSL is subject to ALCO’s oversight. Banking book policies and limits are established to measure and manage the risk. Risk Management regularly reviews the risk exposures and works closely with lines of businesses to recommend strategies to mitigate any unwarranted risk exposures in accordance with the approved policies.

Singapore Dollar interest rate positions are the key interest rate risk driver in the banking book portfolio. Measurements are in place to gauge the maximum tolerance level of the adverse impact of market interest rate towards earnings and economic value. Across the rate shock scenarios prescribed by MAS Notice 637, the bank will experience the worst case maximum impact of S\$198 million towards its economic value under the Parallel Down Interest Rate Shock Scenario.

36 REMUNERATION

The key objectives of the bank’s rewards policy are to ensure that the bank is able to attract, retain and motivate a highly skilled and committed workforce, and to drive behaviours which are aligned to the bank’s strategic vision and its core values which are critical to sustain employee engagement levels, productivity and business growth.

To achieve these objectives, the bank leverages on a holistic total rewards proposition encompassing both monetary and non-monetary components. The bank monitors, reviews and does benchmarking against the industry using information from market surveys by management consultants to determine whether its total rewards remain competitive.

36.1 Key Features of the Bank’s Total Rewards Framework

Key Elements	Purpose
Fixed Pay	Attract and retain talent by providing competitive pay that is externally benchmarked against relevant peers and location, and internally aligned with consideration of differences in individual performance and achievements, skillsets, job scope as well as competency level.
Variable Bonus	<p><u>Variable Bonus</u></p> <ul style="list-style-type: none"> a) Reinforce a pay-for-performance culture and adherence to the Group’s core values b) As part of the bank’s overall corporate governance framework, variable cash awards are designed with deferral and clawback policies to align with the long-term performance goals of the Group and adherence to the risk management principles and standards set out by the Financial Stability Board c) Based on overall Group’s performance, business / corporate function and individual performance d) Performance is measured via the balanced scorecard approach e) Deferral Policy: Any variable cash awards in excess of a certain threshold are subject to a tiered deferral rate over a period of time <p><u>Long-term Incentive Award</u></p> <p>The long-term incentive award is offered within the suite of total rewards for eligible talents and senior management who have a direct line of sight in driving, leading and executing the Maybank Group’s business strategies and objectives.</p>

Key Elements	Purpose
	<u>Clawback Provision</u> The bank, based on risk management issues, financial misstatement, fraud and gross negligence or wilful misconduct, has the discretion to make potential adjustment or clawback on variable bonus and long-term incentive awards.
Benefits	Provide employees with financial protection, access to health care, paid time-off, staff loans at preferential rates and programmes to support work-life balance, etc. for a diverse workforce. The benefits programmes, which blend all elements including cost optimisation and employee / job needs, are reviewed regularly with proactive actions taken to remain competitive in the increasingly dynamic business landscape and to continuously enrich our employees, as part of our total rewards strategy.
Development and Career Opportunities	Continue to invest in the personal and professional growth of the bank's employees. Opportunities provided to employees to chart their careers across different businesses and geographies.

The remuneration of control units is measured and assessed independently from the business units that they are supporting to avoid any conflict of interests. The bank's remuneration policy is submitted to the Board for approval.

36.2 Remuneration of Senior Officers and Other Material Risk Takers

Senior Management by virtue of their roles and responsibilities would naturally be classified as material risk takers. These are individual employees or a group of employees collectively involved in strategic decision making and are accountable for the bank's performance and risk profile.

Other material risk takers are individual employees or a group of employees who can collectively and materially commit significant amount of resources that have significant impact on the bank's performance and risk profile.

The remuneration package of the Chief Executive Officer ("CEO"), the Senior Management and other material risk takers are reviewed annually and submitted to the Group Nomination and Remuneration Committee ("NRC") for recommendation to the Board for approval.

The Board is of the view that given the sensitive and confidential nature of the individual's remuneration, detailed disclosure on the remuneration of each of these individuals is not in the best interests of the bank and providing such remuneration details will prejudice the bank's interests in relation to its competitors, given that the financial industry is highly competitive.

The bank also took into consideration that such disclosure is typically made by companies to keep their shareholders informed. In this case, the Group has full knowledge of the remuneration of the CEO, the Senior Management and other key material risk takers.

The general details of the remuneration of the Senior Management and other material risk takers for FY2019 are set out below:

36.3 Remuneration Awarded During the Financial Year

Category		(a)	(b)
		Senior Management	Other Material Risk-takers
	Fixed remuneration		
1	Number of employees	13	9
2	Total fixed remuneration (row 3 + row 5 + row 7)	61.0%	65.5%
3	of which: cash-based	59.8%	64.4%
4	of which: deferred	-	-
5	of which: shares and other share-linked instruments	-	-
6	of which: deferred	-	-
7	of which: other forms of remuneration	1.2%	1.2%
8	of which: deferred	-	-
	Variable remuneration		
9	Number of employees	13	9
10	Total variable remuneration (row 11 + row 13 + row 15)	39.0%	34.5%
11	of which: cash-based	39.0%	34.5%
12	of which: deferred	-	-
13	of which: shares and other share-linked instruments	-	-
14	of which: deferred	-	-
15	of which: other forms of remuneration	-	-
16	of which: deferred	-	-
17	Total remuneration (Row 2 + Row 10)	100.0%	100.0%

36.4 Special Payments

Category	Guaranteed bonuses		Sign-on awards		Severance payments	
	Number of employees	Total amount	Number of employees	Total amount	Number of employees	Total amount
1 Senior Management	-	-	-	-	-	-
2 Other Material Risk-takers	-	-	-	-	-	-

36.5 Deferred Remuneration

		(a)	(b)	(c)	(d)	(e)
	Deferred and retained remuneration	Total outstanding deferred remuneration	of which: total outstanding deferred and retained remuneration exposed to ex post explicit and/or implicit adjustments	Total amendments during the year due to ex post explicit adjustments	Total amendments during the year due to ex post implicit adjustments	Total deferred remuneration paid out in the financial year
Senior Management						
1	Cash	-	-	-	-	-
2	Shares	-	-	-	-	-
3	Share-linked instruments	-	-	-	-	-
4	Other	-	-	-	-	-
Other material risk-takers						
5	Cash	-	-	-	-	-
6	Shares	-	-	-	-	-
7	Share-linked instruments	-	-	-	-	-
8	Other	-	-	-	-	-

Due to restrictions under the Malaysian foreign laws, regulatory requirements and/or systems and administrative constraints, the Maybank Employee Share Grant Plan Scheme (“ESGP”) is not extended to the Senior Officers and Other Material Risk Takers of MSL. The Group will however grant them from time-to-time within the ESGP period, an alternative cash-settled performance-based ESGP (“CESGP”).

In FY2019, a total of 423,000 units and 128,000 units of Maybank shares (for On Target performance levels) under CESGP were awarded to 13 Senior Officers and 9 OMRTs respectively. The number of CESGP units to be paid by 2022 would be conditional upon the said employees fulfilling the payment criteria.