



Pillar 3 Disclosure Report

Quarter ended December 2021

Maybank Singapore Limited

Incorporated in Singapore

Company Registration Number: 201804195C

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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” (“MAS Notice 637”). The following disclosures are made pursuant to MAS Notice 637.

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 2021 have been prepared in accordance with the internal control processes approved by the MSL Board of Directors.



Dr John Lee Hin Hock

Country CEO and CEO of Maybank Singapore

14 April 2022

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.

The bank's CET1 ratio, tier 1 ratio and total capital ratio as at December 2021 have remained largely stable, with increases of 0.8 percentage points for CET1 and tier 1 ratio and 0.7 percentage points for total capital ratio as compared to the previous quarter. This is mainly due to an increase in CET1 capital contributed by an increase in retained earnings recognised for the year.

Liquidity coverage ratio on Country Group basis has decreased by 5 percentage points as compared to the previous quarter due to an increase in total net cash outflow and decrease in holding of High Quality Liquid Assets.

SGD million		(a)	(b)	(c)	(d)	(e)
		31 Dec 2021	30 Sep 2021	30 Jun 2021	31 Mar 2021	31 Dec 2020
	Available amount (amounts)					
1	CET1 capital	2,070	1,977	1,983	1,971	2,033
2	Tier 1 capital	2,070	1,977	1,983	1,971	2,033
3	Total capital	2,656	2,590	2,592	2,573	2,638
	Risk weighted assets (amounts)					
4	Total RWA	14,793	14,948	14,729	14,620	14,589
	Risk-based capital ratios as a percentage of RWA					
5	CET1 ratio (%)	14.0	13.2	13.5	13.5	13.9
6	Tier 1 ratio (%)	14.0	13.2	13.5	13.5	13.9
7	Total capital ratio (%)	18.0	17.3	17.6	17.6	18.1
	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	2.5
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	2.5
12	CET1 available after meeting the Reporting Bank's minimum capital requirements (%)	6.0	5.2	5.5	5.5	5.9
	Leverage Ratio (SGD million / %)					
13	Total Leverage Ratio exposure measure	37,804	39,391	40,140	40,096	41,085
14	Leverage Ratio (%) (row 2 / row 13)	5.5	5.0	4.9	4.9	4.9

SGD million		(a)	(b)	(c)	(d)	(e)
		31 Dec 2021	30 Sep 2021	30 Jun 2021	31 Mar 2021	31 Dec 2020
	Liquidity Coverage Ratio (SGD million / %)¹					
15	Total High Quality Liquid Assets	18,960	19,607	20,075	21,464	22,400
16	Total net cash outflow	14,227	14,081	13,454	12,751	12,595
17	Liquidity Coverage Ratio (%)	134	139	150	169	179
	Net Stable Funding Ratio (SGD million / %)²					
18	Total available stable funding	37,858	39,068	41,211	41,206	42,578
19	Total required stable funding	34,085	32,775	33,113	33,571	33,060
20	Net Stable Funding Ratio (%)	111	119	124	123	129

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”) in private sector credit exposures relevant to the calculation of the CCyB.

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 parental 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
Hong Kong	1.00%	22		
Luxembourg	0.50%	*		
Norway	1.00%	*		
Others		12,390		
Total		12,413	0.0%	*

*Amount is less than 0.5

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	not subject to capital requirements or subject to deduction from regulatory capital
Assets						
Cash and balance with a central bank	1,090	1,090	-	-	-	-
Singapore Government securities and treasury bills	4,107	4,107	-	-	-	-
Other government treasury bills and securities	82	82	-	-	-	-
Debts securities	158	158	-	-	-	-
Balances and placements with and loans to banks	2,286	162	2,124	-	-	-
Bills receivable	12	12	-	-	-	-
Loans and advances to non-bank customers	24,441	24,441	-	-	-	-
Amount due from related corporations	3,209	3,209	-	-	-	-
Other assets	74	52	22	-	22	-
Intangible Assets	83	83	-	-	-	-
Right-of-use assets	46	46	-	-	-	-
Property, plant and equipment	20	20	-	-	-	-
Total Assets	35,608	33,462	2,146	-	22	-

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						
Amounts due to central bank	1,237	-	-	-	-	1,237
Deposits of non-bank customers	31,062	-	-	-	-	31,062
Debt securities issued	373	-	-	-	-	373
Bills payable	87	-	-	-	-	87
Amount due to related corporations	6	-	-	-	-	6
Current income tax payable	36	-	-	-	-	36
Other liabilities	181	-	27	-	27	154
Lease liabilities	46	-	-	-	-	46
Deferred tax liabilities	5	-	-	-	-	5
Subordinated Notes	505	-	-	-	-	505
Total Liabilities	33,538	-	27	-	27	33,511

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	35,608	33,462	2,146
2	Liabilities carrying amount under regulatory scope of consolidation ³	27	-	27
3	Total net amount under regulatory scope of consolidation	35,581	33,462	2,119
4	Off-balance sheet amounts		3,946	-
5	Differences due to derivatives and securities financing transaction		-	(2,066)
6	Differences due to consideration of provision		207	1
7	Other differences		(535)	-
8	Exposure amounts considered for regulatory purposes	37,134	37,080	54

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 and are not shown in this table.

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	-	-	-	-	-	-	-	-

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	1,090	
Singapore Government securities and treasury bills	4,107	
Other government treasury bills and securities	82	
Debts securities	158	
Balances and placements with and loans to banks	2,286	
Bills receivable	12	
Loans and advances to non-bank customers	24,441	
of which: Total allowances admitted as eligible T2 capital	86	a
Amount due from related corporations	3,209	
Other assets	74	
Intangible Assets	83	
Right-of-use assets	46	
Property, plant and equipment	20	
Total Assets	35,608	
Liabilities		
Amounts due to central bank	1,237	
Deposits of non-bank customers	31,062	
Debt securities issued	373	
Bills payable	87	
Amount due to related corporations	6	
Current income tax payable	36	
Other liabilities	181	
Lease liabilities	46	
Deferred tax liabilities	5	
Subordinated Notes	505	
Total Liabilities	33,538	
Net Assets	2,070	

SGD million	Amount	Cross Reference to Section 5.2
Equity		
Share capital and other capital	2,000	
of which: Amount eligible as CET1 Capital	2,000	b
Total Reserve	70	
of which: Retained earnings	102	c
of which: Disclosed reserve	(32)	d
Total Equity	2,070	

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)	2,000	b
2	Retained earnings	102	c
3 [#]	Accumulated other comprehensive income and other disclosed reserves	(32)	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	2,070	
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	-	
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		

SGD million		Amount	Cross Reference to Section 5.1
26	National specific regulatory adjustments	-	
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	-	
29	Common Equity Tier 1 capital (CET1)	2,070	
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)	2,070	
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	500	
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	86	a

SGD million		Amount	Cross Reference to Section 5.1
51	Tier 2 capital before regulatory adjustments	586	
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 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 (incl 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)	586	
59	Total capital (TC = T1 + T2)	2,656	
60	Floor-adjusted total risk weighted assets	14,793	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	Common Equity Tier 1 CAR	14.0%	
62	Tier 1 CAR	14.0%	
63	Total CAR	18.0%	
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	6.0%	
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)		
75	Deferred tax assets arising from temporary differences (net of associated deferred tax liability)		

SGD million		Amount	Cross Reference to Section 5.1
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)	56	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	64	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	30	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	48	
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

1	Issuer	Maybank Singapore Limited	Maybank Singapore Limited
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	N.A.	BBG00ST505V9
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel III rules	Common Equity Tier 1	Tier 2
5	Post-transitional Basel III rules	Common Equity Tier 1	Tier 2
6	Eligible at solo/group/group&solo	Group and Solo	Group and Solo
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	T2 Subordinated Notes
8	Amount recognised in regulatory capital (Currency in millions, as of most recent reporting date)	S\$2,000 million	S\$500 million
9	Par value of instrument	N.A.	N.A.
10	Accounting classification	Shareholder's Equity	Liability - amortised cost
11	Original date of issuance	05 November 2018	26 March 2020
12	Perpetual or dated	Perpetual	Dated
13	Original maturity date	No maturity	26 March 2030
14	Issuer call subject to prior supervisory approval	No	Yes
15	Optional call date, contingent call dates and redemption amount	N.A.	26 March 2025
16	Subsequent call dates, if applicable	N.A.	N.A.
	Coupons / dividends		
17	Fixed or floating dividend/coupon	N.A.	Fixed
18	Coupon rate and any related index	N.A.	3.70%, subject to reset if call option is not exercised in accordance with the Subscription Agreement.
19	Existence of a dividend stopper	N.A.	No
20	Fully discretionary, partially discretionary or mandatory	Fully discretionary	Mandatory
21	Existence of step up or other incentive to redeem	N.A.	No
22	Noncumulative or cumulative	N.A.	N.A.
23	Convertible or non-convertible	Non-convertible	Non-convertible

24	If convertible, conversion trigger (s)	N.A.	N.A.
25	If convertible, fully or partially	N.A.	N.A.
26	If convertible, conversion rate	N.A.	N.A.
27	If convertible, mandatory or optional conversion	N.A.	N.A.
28	If convertible, specify instrument type convertible into	N.A.	N.A.
29	If convertible, specify issuer of instrument it converts into	N.A.	N.A.
30	Write-down feature	No	Yes
31	If write-down, write-down trigger(s)	N.A.	A “Trigger Event” is defined as the earlier of (a) MAS notifying the bank in writing that it is of the opinion that a write-off or conversion is necessary, without which the bank would become non-viable; and (b) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the bank would have become non-viable, as determined by MAS.

32	If write-down, full or partial	N.A.	Full -> Trigger Event Write-off Amount means the amount of interest and/or principal to be written-off as the MAS may direct, or as the bank shall determine in accordance with the MAS, which is required to be written-off for the Trigger Event to cease to continue. For the avoidance of doubt, the write-off will be effected in full even in the event that the amount written-off is not sufficient for the Trigger Event to cease to continue.
33	If write-down, permanent or temporary	N.A.	Permanent
34	If temporary write-down, description of write-up mechanism	N.A.	N.A.

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	Subject to the insolvency laws of Singapore and other applicable laws, in the event of a winding-up of the bank, the rights of the Noteholders to payment of principal and interest on the Notes and any other obligations in respect of the Notes are: (i) subordinated in right of payment to the claims of all unsubordinated creditors of the Issuer, (ii) rank senior in right of payment to the rights and claims of creditors in respect of Subordinated Indebtedness, and (iii) rank pari passu in right of payment with the rights and claims of creditors in respect of Tier 2 capital securities.
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	N.A.	N.A.

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 2021	30 Sep 2021
Capital and Total exposures		
Tier 1 Capital	2,070	1,977
Total Exposures	37,804	39,391
Leverage ratio (%)		
Leverage ratio	5.5	5.0

6.2 Leverage Ratio Summary Comparison Table

SGD million		Amount
	Item	31 Dec 2021
1	Total consolidated assets as per published financial statements	35,608
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	17
5	Adjustment for SFTs	-
6	Adjustment for off-balance sheet items	2,179
7	Other adjustments	-
8	Exposure measure	37,804

6.3 Leverage Ratio Common Disclosure Template

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

The bank's leverage ratio as at December 2021 has increased 0.5 percentage points as compared to the previous quarter mainly due to higher Tier 1 capital and lower exposure contributed by a reduction in SFTs. The ratio is well above the 3% regulatory minimum ratio prescribed by MAS, effective 1 January 2018.

SGD million		Amount	
	Item	31 Dec 2021	30 Sep 2021
	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)	33,460	32,704
2	Asset amounts deducted in determining Tier 1 capital	-	-
3	Total exposure measures of on-balance sheet items (excluding derivative transactions and SFTs)	33,460	32,704
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	23	33
5	Potential future exposure associated with all derivative transactions	17	15
6	Gross-up for derivative collaterals 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	40	48
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	2,125	3,973
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	-	-
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	Total SFT exposure measures	2,125	3,973
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	10,076	10,778
18	Adjustments for calculation of exposure measures of off-balance sheet items	(7,897)	(8,112)
19	Total exposure measures of off-balance sheet items	2,179	2,666
	Capital and Total exposures		
20	Tier 1 capital	2,070	1,977
21	Total exposures	37,804	39,391
	Leverage ratio		
22	Leverage ratio	5.5%	5.0%

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 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 29)	Risk drivers significant to the bank, principal risks to the financial services industry.
Statement on Risk Management and Internal Control (page 93)	Risk management framework, risk appetite, risk governance & oversight, risk & compliance culture, risk management practices and processes, compliance framework, Shariah governance framework, stress testing, responsible lending, and cyber and technology risk management policy and guidelines.

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 13)	Stress testing and risk measurements.
Risk Management (page 15)	Risk management framework, risk appetite and risk governance & oversight.

8 OVERVIEW OF RISK-WEIGHTED ASSETS

The following table presents the bank's 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 is mainly due to a drop in exposures to corporates, partially offset by an increase in retail exposures.

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2021	30 Sep 2021	31 Dec 2021
1	Credit risk (excluding CCR)	13,595	13,733	1,359
2	of which: Standardised Approach	5,105	5,119	510
3	of which: F-IRBA	4,258	4,489	426
4	of which: supervisory slotting approach	-	-	-
5	of which: A-IRBA	4,232	4,126	423
6	CCR	22	34	2
7	of which: Current Exposure Method	18	20	2
8	of which: CCR internal models method	-	-	-
9	of which: other CCR	4	13	*
9a	of which: CCP	-	-	-
10	CVA	13	14	1
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	4	4	*
21	of which: SA(MR)	4	4	*

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2021	30 Sep 2021	31 Dec 2021
22	of which: IMA	-	-	-
23	Operational risk	1,159	1,163	116
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	-	-	-
25	Floor adjustment	-	-	-
26	Total	14,793	14,948	1,479

* Amount is less than 0.5

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 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 Credit AL Policy adopts a risk-based approach taking into consideration the risk rating, total credit exposures and facility tenor of the borrower.

The bank engages in various types of credit stress testing typically driven by regulators or internal requirements. The Board / 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	138	24,541	225	19	45	162	24,453
2	Debt securities	-	4,347	*	-	*	-	4,347
3	Off-balance sheet exposures	-	8,425	*	-	*	*	8,425
4	Total	138	37,313	226	19	45	162	37,225

*Amount is less than 0.5

A default by an 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 2021
1	Defaulted loans and debt securities at end of the previous semi-annual reporting period	156
2	Loans and debt securities that have defaulted since the previous semi-annual reporting period	41
3	Returned to non-defaulted status	21
4	Amounts written-off	25
5	Other changes	(13)
6	Defaulted loans and debt securities at end of the semi-annual reporting period (1+2-3-4±5)	138

12 ADDITIONAL DISCLOSURES RELATED TO THE CREDIT QUALITY OF ASSETS

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

Credit exposures are categorised as "Performing Loans" and "Non-Performing Impaired Loans" ("NPIL"). 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/accounts that are past due for more than 90 days on their obligations to the bank.

- Judgmental Trigger - Borrowers that exhibit definable or more severe weaknesses 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)	(h)
	Singapore government securities & treasury bills	Other government treasury bills & securities	Debt securities	Balances and placements with and loans to banks	Bills Receivable & Loans and advances to non-bank customers	Undrawn loan commitments	Contingent liabilities	Total
Singapore	4,107	-	158	5,321	23,785	7,776	118	41,264
India	-	-	-	-	6	3	10	19
Malaysia	-	-	-	-	172	205	5	382
China	-	-	-	-	442	22	5	469
Hong Kong	-	-	-	4	54	13	1	72
Others	-	82	-	171	219	194	73	739
Total	4,107	82	158	5,496	24,678	8,212	212	42,946

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

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Singapore government securities & treasury bills	Other government treasury bills & securities	Debt securities	Balances and placements with and loans to banks	Bills Receivable & Loans and advances to non-bank customers	Undrawn loan commitments	Contingent liabilities	Total
Building and Construction	-	-	-	-	1,506	453	40	1,999
Financial institutions	-	-	-	5,496	1,751	554	1	7,802
Manufacturing	-	-	-	-	635	218	22	874
Transport, storage & communication	-	-	-	-	510	141	10	661
Government & public sector	4,107	82	158	-	-	-	-	4,347
Housing & bridging loans	-	-	-	-	12,742	-	-	12,742
General commerce	-	-	-	-	1,672	970	118	2,760
Professional and private individuals	-	-	-	-	5,597	5,652	6	11,256
Others	-	-	-	-	266	225	15	506
Total	4,107	82	158	5,496	24,678	8,212	212	42,946

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	250	950	861	673	430	943	4,107
Other government treasury bills & securities	-	-	59	-	-	24	82
Debt securities	-	-	-	-	-	158	158
Balances and placements with and loans to banks	1,606	1,584	1,095	302	909	-	5,496
Bills Receivable & Loans and advances to non-bank customers	1,102	900	310	552	1,205	20,610	24,678
Total	2,958	3,433	2,325	1,528	2,544	21,734	34,521

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	135	76	37
Malaysia	2	2	*
Others	-	-	*
Total	138	78	37

*Amount 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	31	16	4
Manufacturing	4	2	7
Transport, storage & communication	2	1	2
Housing & bridging loans	29	6	-
General commerce	46	39	10
Professional and private individuals	16	8	13
Others	10	6	2
Total	138	78	37

The following table shows the ageing analysis of past due but not impaired exposures.

12.6 Ageing Analysis of Past Due but Not Impaired Exposures

SGD million	(a)
	31 Dec 2021
Within 30 days	91
More than 30 to 90 days	85
More than 90 days	*
Total	177

*Amount is less than 0.5

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 borrower 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 2021
Impaired	25
Non-impaired	20
Total	46

13 QUALITATIVE DISCLOSURES RELATED TO CRM TECHNIQUES

The bank may use various risk mitigation methods such as collateral, netting arrangements, credit insurance, credit derivatives 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 collaterals, valuation method and frequency, loan-to-value ("LTV") in order to be recognised as secured, insurance requirements, etc.

Derivatives and repurchase agreements ("REPO") 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 alongside regular analysis of 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	5,530	18,923	18,923	-	-
2	Debt securities	4,347	-	-	-	-
3	Total	9,877	18,923	18,923	-	-
4	Of which: defaulted	23	36	36	-	-

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	59	-	59	-	-	-
2	Central government and central bank	5,220	-	5,220	-	12	*
3	PSE	158	-	158	-	-	-
4	MDB	-	-	-	-	-	-
5	Bank	3,369	1	3,369	1	1,037	31%
6	Corporate	416	475	369	55	424	100%
7	Regulatory retail	2,760	2,190	2,611	103	2,035	75%
8	Residential mortgage	504	40	503	11	192	37%
9	CRE	787	66	786	24	810	100%
10	Equity - SA(EQ)	-	-	-	-	-	-
11	Past due exposures	34	2	16	*	19	121%
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	718	513	522	54	576	100%
14	Total	14,025	3,286	13,613	247	5,105	37%

*Amount 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	59	-	-	-	-	-	-	-	-	59
2	Central government and central bank	5,161	-	59	-	-	-	-	-	-	5,220
3	PSE	158	-	-	-	-	-	-	-	-	158
4	MDB	-	-	-	-	-	-	-	-	-	-
5	Bank	-	-	2,158	-	1,211	-	-	-	-	3,370
6	Corporate	-	-	-	-	-	-	424	-	-	424
7	Regulatory retail	-	-	-	-	-	2,713	-	-	-	2,713
8	Residential mortgage	-	-	-	494	-	4	15	-	-	514
9	CRE	-	-	-	-	-	-	810	-	-	810
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	-	-
11	Past due exposures	-	-	-	-	-	-	9	6	-	16
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	576	-	-	576
14	Total	5,378	-	2,217	494	1,211	2,718	1,835	6	-	13,860

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 Approach (“F-IRBA”) (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 Approach (“A-IRBA”) 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 estimation is based on the portfolio’s Observed Default Rate of the more recent years’ data. The average long-run default experience covering crisis periods (e.g. 2001-2002) is reflected through 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.

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, the quantum of exposure being requested and the facility tenor.

- **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 system, 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 of these borrowers.

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, including the Internal Capital Adequacy Assessment Process ("ICAAP"), and uses regulatory capital charge for decision making and budgeting. Internal ratings are 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 modelling 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 and quantitative factors and their weights are determined by Maybank 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 collaterals offered.

For reference, each grade can be mapped to a set of external agency ratings, such as the S&P rating. This is illustrated in Table 1 which provides the indicative mapping of internal rating grades of corporate borrowers to 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 A-IRBA for 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 by estimating all three main components of RWA calculation, namely PD, EAD and LGD, based on historical data.

17.5 Independent Model Validation

The use of models will give rise to model risk, which is defined as the risk of a model not performing the tasks or being able to capture the risks it was designed for. Any model not performing in line with expectations may potentially result in financial loss, incorrect business decisions, misstatement of external financial disclosures, or damage to the reputation.

To manage this risk, the Model Risk Management ("MRM") framework was introduced in 2019 to provide an overall governance as well as clear roles and responsibilities throughout the model lifetime in order to manage new models being introduced mainly to support business analytics and decision making. As part of the MRM, model validation is performed to assess whether the model is performing according to expectations. The model validation function at Maybank Group is distinct from the model development function and model users, with the objective to provide the required independence in performing the function. In line with regulatory requirements, all credit IRBA models used for capital calculation and finance models used for FRS 9 reporting are subject to independent validation by the Model Validation team. Additionally, as part of best practices, other significant models such as market risk models used for valuation and pricing are also subject to independent validation. Approval and oversight of model validation are governed by a technical committee and the relevant risk committees. The technical committee known as Model Validation and Acceptance Committee ("MVAC") meets regularly and its membership is drawn from Risk and Business stakeholders.

In general, validation techniques include both quantitative and qualitative analysis to test the appropriateness and robustness of the models used. Validation of the models covers activities that evaluate and examine the rating system and the estimation process and methods for deriving the risk components. For instance, for credit risk models, the risk components are PD, LGD and EAD. The process involves validating whether risk models are capable of discriminating ('discriminatory or rank ordering power') and are giving consistent and predictive estimates ('calibration') of the relevant risk parameters.

Model validation is conducted at two stages:

- Pre-implementation model validation, which is conducted prior to launch of the model; and
- Post-implementation validation, which is performed at least on an annual basis for models used for IRBA capital calculation. For other types of models deemed less risky and not subject to regulatory requirements, post-implementation validation may be performed on a less frequent basis.

In addition to annual review, frequent monitoring is performed by the model owners to ensure that models are performing as expected, and that the assumptions used in model development remain appropriate.

As part of overall governance, validation processes are also subject to regular independent reviews by Internal Audit.

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	112	110	6%	119	0.11%	63	40%	3.7	44	37%	*	
0.15 to < 0.25	59	85	22%	78	0.20%	42	39%	2.7	34	43%	*	
0.25 to < 0.50	448	309	10%	479	0.35%	167	41%	3.7	344	72%	1	
0.50 to < 0.75	307	148	7%	317	0.55%	101	40%	3.8	264	83%	1	
0.75 to < 2.50	1,199	571	21%	1,317	1.53%	415	41%	3.4	1,536	117%	8	
2.50 to < 10.00	445	246	18%	490	3.76%	156	40%	3.1	675	138%	7	
10.00 to < 100.00	137	117	8%	147	11.93%	375	41%	3.6	308	210%	7	
100.00 (Default)	62	26	6%	63	100.00%	38	43%	4.2	-	-	27	
Sub-total	2,769	1,611	15%	3,010	4.08%	1,357	41%	3.5	3,204	106%	52	82
Corporate Small Business												
0.00 to < 0.15	27	53	5%	30	0.12%	35	41%	2.8	8	28%	*	
0.15 to < 0.25	23	23	8%	24	0.20%	22	41%	2.0	8	32%	*	
0.25 to < 0.50	224	213	13%	252	0.35%	108	42%	3.4	177	70%	*	
0.50 to < 0.75	91	50	8%	95	0.55%	36	39%	4.0	63	67%	*	
0.75 to < 2.50	575	368	11%	616	1.41%	200	42%	3.6	622	101%	4	
2.50 to < 10.00	132	74	12%	141	3.80%	63	41%	2.8	152	108%	2	
10.00 to < 100.00	12	5	1%	12	14.81%	13	44%	2.9	23	202%	1	
100.00 (Default)	4	1	-	4	100.00%	1	42%	3.7	-	-	2	
Sub-total	1,087	786	11%	1,173	1.82%	478	41%	3.4	1,054	90%	9	14
Total (all portfolios)	3,856	2,397	14%	4,183	3.45%	1,835	41%	3.5	4,258	102%	60	96

*Amount 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	72	26	100%	98	0.13%	167	22%		7	7%	*	
0.15 to < 0.25	2,120	132	100%	2,252	0.22%	6,147	23%		233	10%	1	
0.25 to < 0.50	6,132	637	100%	6,769	0.36%	10,621	23%		992	15%	5	
0.50 to < 0.75	3,320	611	100%	3,931	0.58%	4,631	22%		810	21%	5	
0.75 to < 2.50	766	331	100%	1,096	1.35%	1,317	23%		390	36%	3	
2.50 to < 10.00	562	188	100%	750	3.59%	701	22%		485	65%	6	
10.00 to < 100.00	19	-	-	19	20.72%	60	23%		25	131%	1	
100.00 (Default)	33	-	-	33	100.00%	72	32%		63	193%	6	
Sub-total	13,024	1,925	100%	14,949	0.88%	23,477	23%		3,006	20%	28	40
Qualifying Revolving Retail												
0.00 to < 0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to < 0.25	*	1	60%	1	0.24%	58	90%		*	12%	*	
0.25 to < 0.50	78	734	60%	517	0.37%	57,515	90%		87	17%	2	
0.50 to < 0.75	37	502	62%	349	0.58%	31,635	90%		84	24%	2	
0.75 to < 2.50	160	1,012	57%	736	1.27%	77,064	90%		317	43%	8	
2.50 to < 10.00	28	158	56%	117	4.46%	13,609	90%		123	105%	5	
10.00 to < 100.00	12	33	49%	28	17.40%	3,204	90%		60	212%	4	
100.00 (Default)	5	5	100%	10	100.00%	527	90%		13	133%	8	
Sub-total	322	2,445	59%	1,758	1.90%	183,611	90%		684	39%	29	11

*Amount is less than 0.5

	(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	389	-	-	389	0.10%	12,667	32%		34	9%	*	
0.15 to < 0.25	550	-	-	550	0.19%	14,316	35%		79	14%	*	
0.25 to < 0.50	874	9	52%	879	0.42%	20,335	36%		218	25%	1	
0.50 to < 0.75	118	1	36%	119	0.61%	2,355	38%		38	32%	*	
0.75 to < 2.50	341	11	47%	346	1.13%	6,896	38%		145	42%	2	
2.50 to < 10.00	43	2	10%	43	3.55%	941	39%		25	59%	1	
10.00 to < 100.00	3	*	11%	3	18.30%	77	40%		3	84%	*	
100.00 (Default)	1	*	100%	1	100.00%	13	85%		1	117%	1	
Sub-total	2,319	23	46%	2,330	0.55%	57,366	36%		542	23%	5	6
Total (all portfolios)	15,665	4,393	77%	19,037	0.93%	244,125	30%		4,232	22%	62	57

*Amount 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\$125 million quarter-on-quarter mainly due to improvement in asset quality coupled with a drop in asset size of corporate portfolios under the IRBA.

SGD million		(a)
		RWA amounts
1	RWA as at end of previous quarter	8,615
2	Asset size	(54)
3	Asset quality	(69)
4	Model updates	-
5	Methodology and policy	-
6	Acquisitions and disposals	-
7	Foreign exchange movements	(2)
8	Other	-
9	RWA as at end of quarter	8,490

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: new 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%	103	98	-	-	0.43%
0.15 to < 0.25	A-	A-	A3	0.20%	0.20%	87	64	-	-	0.81%
0.25 to < 0.50	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.35%	0.35%	274	276	1	-	0.75%
0.50 to < 0.75	BBB-	BBB-	Baa3	0.55%	0.55%	146	139	1	-	1.05%
0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.50%	1.44%	605	615	4	-	0.98%
2.50 to < 10.00	B to CCC	B to CCC	B2 to Caa2	3.77%	3.96%	237	221	2	-	4.04%
10.00 to < 100.00	CCC- to C	CCC- to C	Caa3 to Ca	12.14%	13.70%	466	392	4	-	9.30%

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: new 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%	263	166	-	-	0.00%
0.15 to < 0.25				0.22%	0.22%	5,767	6,058	1	-	0.06%
0.25 to < 0.50				0.36%	0.35%	9,376	10,539	2	-	0.08%
0.50 to < 0.75				0.58%	0.58%	4,161	4,594	5	-	0.12%
0.75 to < 2.50				1.35%	1.34%	1,607	1,306	2	-	0.45%
2.50 to < 10.00				3.59%	3.77%	825	693	12	-	2.29%
10.00 to < 100.00				20.72%	21.45%	169	58	10	-	16.40%
QRRE asset sub-class										
0.00 to < 0.15				-	-	-	-	-	-	0.00%
0.15 to < 0.25				0.24%	0.24%	50	58	-	-	0.04%
0.25 to < 0.50				0.37%	0.37%	65,262	57,517	36	-	0.16%
0.50 to < 0.75				0.58%	0.59%	38,639	31,635	27	-	0.50%
0.75 to < 2.50				1.27%	1.28%	70,585	77,068	391	-	0.71%
2.50 to < 10.00				4.46%	4.40%	17,710	13,610	80	-	1.85%
10.00 to < 100.00				17.40%	16.94%	4,215	3,204	204	-	9.76%
Other retail exposures asset sub-class										
0.00 to < 0.15				0.10%	0.10%	16,736	12,625	-	-	0.04%
0.15 to < 0.25				0.19%	0.19%	18,201	14,252	-	-	0.07%
0.25 to < 0.50				0.42%	0.41%	14,641	20,266	1	-	0.17%
0.50 to < 0.75				0.61%	0.61%	2,413	2,339	2	-	0.77%

(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: new 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				1.13%	1.13%	4,732	6,856	4	2	1.19%
2.50 to < 10.00				3.55%	3.54%	1,045	938	5	-	2.55%
10.00 to < 100.00				18.30%	19.35%	148	77	19	3	18.27%

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 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)	23	17			34	18
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					20	4
5	VaR for SFTs					-	-
6	Total						22

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	34	13
4	Total portfolios subject to the CVA risk capital requirement	34	13

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	-	-	29	17	-	-	-	-	46
Corporate	-	-	-	-	-	*	-	-	*
Regulatory retail	-	-	-	-	*	-	-	-	*
Other exposures	-	-	-	-	-	7	-	-	7
Total	-	-	29	17	*	7	-	-	53

*Amount is less than 0.5

27 CCR EXPOSURES BY PORTFOLIO AND PD 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	*	0.12%	4	45%	1.00	*	23%
0.15 to < 0.25	*	0.20%	1	45%	1.00	*	32%
0.25 to < 0.50	*	0.37%	6	45%	1.00	*	47%
0.50 to < 0.75	*	0.55%	4	45%	1.00	*	58%
0.75 to < 2.50	*	1.77%	9	45%	1.00	*	96%
2.50 to < 10.00	*	6.66%	2	45%	1.00	*	157%
10.00 to < 100.00	*	11.30%	2	45%	1.00	*	196%
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	1	0.77%	28	45%	1.00	*	58%
Corporate Small Business							
0.00 to < 0.15	*	0.14%	2	45%	1.00	*	20%
0.15 to < 0.25	*	0.20%	2	45%	1.00	*	26%
0.25 to < 0.50	*	0.39%	4	45%	1.00	*	41%
0.50 to < 0.75	*	0.55%	1	45%	1.00	*	54%
0.75 to < 2.50	*	0.83%	5	45%	1.00	*	60%
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	*	0.50%	14	45%	1.00	*	45%
Total (sum of portfolios)	1	0.71%	42	45%	1.00	1	55%

*Amount 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	-	-	-	-	-	1,714
Cash - other currencies	-	-	-	-	-	411
Domestic sovereign debt	-	-	-	-	1,549	-
Other sovereign debt	-	-	-	-	109	-
Government agency debt	-	-	-	-	186	-
Corporate bonds	-	-	-	-	277	-
Equity securities	-	-	-	-	-	-
Other collateral	-	-	-	-	18	-
Total	-	-	-	-	2,140	2,125

29 CREDIT DERIVATIVE EXPOSURES

The bank does not have credit derivatives exposure as at 31 December 2021.

30 EXPOSURE TO CENTRAL COUNTERPARTIES

The bank does not have exposure to central counterparties as at 31 December 2021.

31 SECURITISATION

The bank does not have securitisation exposure as at 31 December 2021.

32 QUALITATIVE DISCLOSURES RELATED TO MARKET RISK

The bank does not have a trading book as of 31 December 2021.

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	4
4	Commodity risk	-
	Options	
5	Simplified approach	-
6	Delta-plus method	-
7	Scenario approach	-
8	Securitisation	-
9	Total	4

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 comprises 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 to 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 Non-Financial Risk Framework, Policy & Procedures, supplemented by associated tools, such as the Risk Control Self-Assessment (“RCSA”), Key Risk Indicators (“KRI”) and Incident Management Data Collection (“IMDC”). Operational risk events are classified according to Basel standards and are reported through well-established principles and thresholds.

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 program to ensure the bank’s resilience in the event of a disaster. The Non-Financial Risk Committee and Executive Risk Committee in MSL govern operational risk and meet on a quarterly and monthly basis (respectively) to discuss, manage and direct the treatment of existing and emerging operational risk issues as part of their 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

Interest Rate Risk in the Banking Book (“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 business to recommend strategies to mitigate any unwarranted risk exposures in accordance with the approved policies.

Singapore Dollar and US Dollar are the key material currencies within the banking book portfolio as of December 2021. Measurements are in place to gauge the maximum tolerance level of the adverse impact of market interest rate towards earnings and economic value. As of 31 December 2021, across the rate shock scenarios prescribed by MAS Notice 637, the bank would experience the worst-case maximum impact of SGD82 million towards its economic value under the Short Rate Down Interest Rate Shock Scenario.

36 REMUNERATION

The bank's remuneration and rewards philosophy is aligned with its business strategies and values, and serves to foster a performance-oriented culture that delivers long-term sustainable returns for its stakeholders.

The bank has in place a comprehensive Total Rewards system which forms a holistic and strategic component of its integrated Talent Management framework, guiding it to effect "Reward Right" principles to drive positive outcomes and deliver exponential business results responsibly. The system not only supports the bank's strategy and business plan, but is also critical to improving employee productivity and engagement. By focusing on the right compensation, benefits and development support, it inspires employees to achieve their personal and professional aspirations.

Governed by sound principles, the bank's remuneration policies and practices are reviewed periodically to ensure alignment with regulatory requirements and to reinforce a high-performance culture. The aim is to attract, motivate and retain talent through market competitiveness and responsible values.

36.1 Components of Remuneration

The bank adopts a holistic Total Rewards Framework comprising three main elements, namely Total Compensation, Benefits & Well-Being, and Development & Career Opportunities.

36.1.1 Total Compensation

Total Compensation is based on two components, Fixed Pay and Variable Pay (i.e. Variable Bonus and Long-term Incentive Award), with targeted Pay Mix levels designed to align with the long-term performance goals and objectives of the organisation. The compensation framework provides a balanced approach between fixed and variable components that change according to the performance of the Group, business/corporate functions and individuals.

Component	Purpose
Fixed Pay	Attract and retain talent by providing competitive and equitable level of pay. Reviewed annually through internal and external benchmarking against relevant peers / locations, aligned with market dynamics, differences in an individual's responsibilities, performance, achievements, skillsets, as well as competency level.
Variable Bonus	<u>Variable Bonus</u>

Component	Purpose
	<p>a) Reinforce a pay-for-performance culture and adherence to the Maybank Group's TIGER Core Values.</p> <p>b) Variable cash award design that is aligned with the long-term performance goals of the Group through deferral and claw-back policies.</p> <p>c) Based on the overall performance of the Maybank Group, business/corporate functions and individuals. Performance is measured using Balanced Scorecard.</p> <p><u>Long-term Incentive Award</u> Offered to eligible talent and senior management who have a direct line of responsibility in driving, leading and executing Maybank Group's business strategies and objectives.</p> <p><u>Deferral Policy</u> Any Variable Bonus in excess of certain thresholds will be deferred over a period of time. A Deferred Variable Bonus will lapse immediately upon termination of employment (including resignation) except in the event of ill health, disability, redundancy, retirement or death.</p> <p><u>Clawback Provision</u> The Board has the right to make adjustments or clawbacks to any Variable Bonus or Long-term Incentive Award if deemed appropriate based on risk management issues, financial misstatement, fraud, gross negligence or wilful misconduct.</p>

36.1.2 Benefits & Well-being

The bank believes in promoting employees' well-being through the provision of financial protection, health care benefits, paid time-off and programmes that support work-life integration. The benefits programmes, which blend all elements including cost optimisation and employee/job needs, are reviewed regularly in order to remain competitive in an increasingly dynamic business landscape. In light of the COVID-19 pandemic, working remotely has become a new normal. This is supported by a strong infrastructure built on innovative platforms, together with the right policies and systems to enable employees to perform their best.

36.1.3 Development and Career Opportunities

The bank continues to deploy best-in-class learning and development programmes to nurture its employees at all levels. A strong learning culture is grounded in a multitude of flexible and customisable learning and development programmes for employees' long-term relevance, competitive advantage and growth. Employees are also encouraged to assume personal ownership of their development by upgrading their skills and taking on stretch assignments as well as expanded responsibilities.

36.2 Long-Term Incentive Award - Employees' Share Grant Plan

In December 2018, the bank rolled out the Employees' Share Grant Plan ("ESGP") under the Long-Term Incentive Award to replace a previous scheme that expired in June 2018. The ESGP is valid for seven years and it serves as a long-term incentive for eligible talent and senior management.

Due to restrictions under the Malaysian foreign laws, regulatory requirements and/or systems and administrative constraints, senior management and other material risk takers are not eligible to participate in the ESGP.

Senior management and other material risk takers are however eligible to participate in the Cash-settled Performance-based Employees' Share Grant Plan ("CESGP"). The CESGP is a cash plan where a cash amount (equivalent to the value of the Maybank reference shares) is awarded to eligible employees.

Vesting eligibility of the ESGP / CESGP is subject to fulfilment of the ESGP / CESGP vesting conditions as well as upon meeting the performance criteria at the Maybank Group and individual levels.

The first ESGP / CESGP Award that was granted in December 2018 vested in December 2021. The second ESGP / CESGP Award granted in September 2019 will vest in 2022, the third ESGP / CESGP Award which was granted in September 2020 will vest in 2023, and the fourth ESGP / CESGP Award which was granted in September 2021 will vest in 2024.

In the financial year 2021, the CESGP was awarded to the senior management and other material risk takers where the cash payment based on the value of 461,000 units and 411,000 units of Maybank shares awarded to the senior management and other material risk takers respectively, will be made to the employees by 2024 and is conditional upon the employees fulfilling the payment criteria⁵.

36.3 Governance & Controls - Remuneration Practices

⁵ The total CESGP awarded to the eligible employees at award date is based on assumption that Maybank Group and the eligible employees have met performance targets. The vesting date is conditional upon fulfilling the vesting criteria.

The bank’s remuneration policies and practices comply with all statutory and regulatory requirements, and are strengthened by sound risk management and controls, ensuring remuneration practices are carried out responsibly.

The bank has strong internal governance on the performance and remuneration of control functions which are measured and assessed independently from the business units to avoid any conflict of interests. The remuneration of employees in control functions is predominantly fixed to reflect the nature of their responsibilities. Annual reviews of their compensation are benchmarked internally and against the market to ensure they are competitive.

Based on sound Performance Management principles, the bank’s Key Performance Indicators (“KPIs”) are outcome focused and aligned with business plans. Each of the Senior Officers and Other Material Risk Takers (“OMRT”) carry Risk, Governance and Compliance goals in their individual scorecards which are cascaded accordingly. The right KPI setting continues to shape the organisational culture while driving risk and compliance agendas effectively. Inputs from control functions and Board Committees are incorporated into the respective functional areas and individual performance results.

36.4 Remuneration of Senior Officers and Other Material Risk Takers

The bank’s key executives comprise senior management who 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 CEO, senior management and other material risk takers are reviewed annually and submitted to the Maybank Group Nomination and Remuneration Committee (“NRC”) for recommendation to the Board for approval.

36.5 Remuneration Awarded During the Financial Year

Category		(a)	(b)
		Senior Management	Other Material Risk-takers
	Fixed remuneration		
1	Number of employees	12	46
2	Total fixed remuneration (row 3 + row 5 + row 7)	63.2%	74.5%
3	of which: cash-based	61.4%	74.4%

Category		(a)	(b)
		Senior Management	Other Material Risk-takers
	Fixed remuneration		
4	of which: deferred	-	-
5	of which: shares and other share-linked instruments	-	-
6	of which: deferred	-	-
7	of which: other forms of remuneration	1.8%	0.1%
8	of which: deferred	-	-
	Variable remuneration		
9	Number of employees	12	41
10	Total variable remuneration (row 11 + row 13 + row 15)	36.8%	25.5%
11	of which: cash-based	35.7%	24.9%
12	of which: deferred	-	-
13	of which: shares and other share-linked instruments	-	-
14	of which: deferred	-	-
15	of which: other forms of remuneration	1.1%	0.6%
16	of which: deferred	-	-
17	Total remuneration (Row 2 + Row 10)	100.0%	100.0%

36.6 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	-	-	-	-	-	-

36.7 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	-	-	-	-	-

37 ABBREVIATIONS

Abbreviations	Brief Description
A-IRBA	Advanced Internal Ratings-Based Approach
ALCO	Asset and Liability Management Committee
AT1	Additional Tier 1 Capital
BOD	Board of Directors
BRR	Borrower Risk Rating
CCF	Credit Conversion Factor
CCP	Central Counterparty
CCR	Counterparty Credit Risk
CCyB	Countercyclical Capital Buffer
CESGP	Cash-settled Performance-based Employees' Share Grant Plan
CET1	Common Equity Tier 1 Capital
CMS	Credit Management Singapore
CRM	Credit Risk Mitigation
CRRS	Credit Risk Rating System
CVA	Credit Valuation Adjustment
D-SIB	Domestic Systemically Important Banks
EAD	Exposure At Default
ECAI	External Credit Assessment Intuitions
ECL	Expected Credit Loss
EL	Expected Loss
EPE	Expected Positive Exposure
ERC	Executive Risk Management Committee
ESGP	Employees' Share Grant Plan
EWS	Early Warning Signal
F-IRBA	Foundation Internal Ratings-Based Approach
FC(SA)	Financial Collateral Simple Approach
G-SIB	Global Systemically Important Banks
IAA	Internal Assessment Approach
ICAAP	Internal Capital Adequacy Assessment Process
IMA	Internal Models Approach
IMDC	Incident Management Data Collection
IMM	Internal Models Method
ISDA	International Swaps & Derivatives Association
IRBA	Internal Ratings-Based Approach
IRRBB	Interest Rate Risk in the Banking Book
KPI	Key Performance Indicators
KRI	Key Risk Indicators
LGD	Loss Given Default
LTV	Loan-to-value
MAS	Monetary Authority of Singapore
MDB	Multilateral Development Bank
MRM	Model Risk Management

Abbreviations	Brief Description
MSL	Maybank Singapore Limited
MVAC	Model Validation and Acceptance Committee
NBIC	Non-Bank Intuitional Counterparty
NFRC	Non-Financial Risk Committee
NRC	Nomination and Remuneration Committee
NPIL	Non-Performing Impaired Loans
OMRT	Other Material Risk Takers
PD	Probability of Default
PSE	Public Sector Entity
PSR	Pre-Settlement Risk
PVA	Prudent Valuation Adjustments
RCSA	Risk Control Self-Assessment
REPO	Repurchase Agreements
RMCC	Risk Management and Compliance Committee
RWA	Risk-Weighted Assets
SA	Standardised Approach
SA(CR)	Standardised Approach to Credit Risk
SA(EQ)	Standardised Approach for Equity Exposures
SA(MR)	Standardised Approach to Market Risk
SEC-ERBA	Securitisation External Ratings-Based Approach
SEC-IRBA	Securitisation Internal Ratings-Based Approach
SEC-SA	Securitisation Standardised Approach
SFT	Securities or Commodities Financing Transaction
SMA	Special Mention Account
SMC	Singapore Management Committee
SGD	Singapore Dollar
T2	Tier 2 Capital
TC	Total Capital
TEP	Total Eligible Provisions
WL	Watch List