



Pillar 3 Disclosure Report

Quarter ended December 2022

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.....	6
4	LINKAGES BETWEEN FINANCIAL STATEMENTS AND REGULATORY EXPOSURES	7
4.1	Differences between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories	7
4.2	Main Sources of Differences between Regulatory Exposure Amounts and Carrying Amounts in Financial Statements	9
4.3	Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts.....	10
4.4	Prudent Valuation Adjustments.....	11
5	COMPOSITION OF CAPITAL.....	12
5.1	Reconciliation of Regulatory Capital to Balance Sheet	12
5.2	Composition of Regulatory Capital	14
5.3	Main Features of Regulatory Capital Instruments.....	18
6	LEVERAGE RATIO	22
6.1	Leverage Ratio.....	22
6.2	Leverage Ratio Summary Comparison Table	22
6.3	Leverage Ratio Common Disclosure Template	22

7	RISK MANAGEMENT APPROACH	24
8	OVERVIEW OF RISK-WEIGHTED ASSETS	26
9	GENERAL QUALITATIVE DISCLOSURES ON CREDIT RISK	28
10	CREDIT QUALITY OF ASSETS	29
11	CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES	30
12	ADDITIONAL DISCLOSURES RELATED TO THE CREDIT QUALITY OF ASSETS	31
12.1	Breakdown of Major Types of Credit Risk Exposures by Geographical Areas	33
12.2	Breakdown of Major Types of Credit Risk Exposures by Industry Sector	34
12.3	Breakdown of Major Types of Credit Risk Exposures by Residual Maturity	35
12.4	Breakdown by Geographical Areas	36
12.5	Breakdown by Industry	36
12.6	Ageing Analysis of Past Due but Not Impaired Exposures	37
12.7	Restructured Exposures	37
13	QUALITATIVE DISCLOSURES RELATED TO CRM TECHNIQUES	38
14	OVERVIEW OF CRM TECHNIQUES	39
15	QUALITATIVE DISCLOSURES ON THE USE OF EXTERNAL CREDIT RATINGS UNDER THE SA(CR)...	40
16	CREDIT RISK EXPOSURES UNDER STANDARDISED APPROACH	41
16.1	SA(CR) and SA(EQ) - Credit Risk Exposure and CRM Effects	41
16.2	SA(CR) and SA(EQ) - Exposures by Asset Classes and Risk Weights	42

17	QUALITATIVE DISCLOSURES FOR IRBA MODELS.....	43
17.1	Application of Internal Ratings.....	44
17.2	Non-Retail Portfolio	45
17.3	Credit Risk Models and Tools	45
17.4	Retail Portfolio	46
17.5	Independent Model Validation	46
18	CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE.....	48
19	EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM	51
20	IRBA - RWA FLOW STATEMENT FOR CREDIT RISK EXPOSURES.....	51
21	IRBA - BACKTESTING OF PD PER PORTFOLIO	52
22	SPECIALISED LENDING AND EQUITIES UNDER THE SIMPLE RISK WEIGHT METHOD.....	55
23	QUALITATIVE DISCLOSURES RELATED TO CCR.....	55
24	ANALYSIS OF CCR BY APPROACH.....	56
25	CVA RISK CAPITAL REQUIREMENTS.....	56
26	CCR EXPOSURES BY PORTFOLIO AND RISK WEIGHTS	57
27	CCR EXPOSURES BY PORTFOLIO AND PD RANGE	58
28	COMPOSITION OF COLLATERAL FOR CCR EXPOSURE	59

29	CREDIT DERIVATIVE EXPOSURES.....	60
30	EXPOSURE TO CENTRAL COUNTERPARTIES	60
31	SECURITISATION	60
32	QUALITATIVE DISCLOSURES RELATED TO MARKET RISK	61
33	MARKET RISK UNDER STANDARDISED APPROACH	61
34	OPERATIONAL RISK.....	62
35	INTEREST RATE RISK IN THE BANKING BOOK.....	63
36	REMUNERATION.....	64
36.1	Components of Remuneration.....	64
36.1.1	Total Compensation	64
36.1.2	Benefits & Well-being	65
36.1.3	Development and Career Opportunities.....	66
36.2	Long-Term Incentive Award - Employees' Share Grant Plan	66
36.3	Governance & Controls - Remuneration Practices.....	67
36.4	Remuneration of Senior Officers and Material Risk Personnel	67
36.5	Remuneration Awarded During the Financial Year	68
36.6	Special Payments.....	69
36.7	Deferred Remuneration	69
37	ABBREVIATIONS.....	70

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 2022 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

19 April 2023

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 increase in capital ratio compared to the previous quarter is mainly due to an increase in CET1 capital, which is contributed by an increase in retained earnings recognized and a decrease in mark to market loss on fair value through other comprehensive income (“FVOCI”) securities.

Liquidity coverage ratio on Country Group basis has increased by 11 percentage points as compared to the previous quarter due to a decrease in total net cash outflow and increase in holding of High Quality Liquid Assets.

SGD million		(a)	(b)	(c)	(d)	(e)
		31 Dec 2022	30 Sep 2022	30 Jun 2022	31 Mar 2022	31 Dec 2021
	Available amount (amounts)					
1	CET1 capital	2,085	1,993	1,933	2,004	2,070
2	Tier 1 capital	2,085	1,993	1,933	2,004	2,070
3	Total capital	2,695	2,594	2,521	2,593	2,656
	Risk weighted assets (amounts)					
4	Total RWA	14,706	14,616	15,101	14,899	14,793
	Risk-based capital ratios as a percentage of RWA					
5	CET1 ratio (%)	14.2	13.6	12.8	13.5	14.0
6	Tier 1 ratio (%)	14.2	13.6	12.8	13.5	14.0
7	Total capital ratio (%)	18.3	17.7	16.7	17.4	18.0
	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 (%)	6.2	5.6	4.8	5.5	6.0
	Leverage Ratio (SGD million / %)					
13	Total Leverage Ratio exposure measure	37,129	37,520	39,113	39,137	37,804
14	Leverage Ratio (%) (row 2 / row 13)	5.6	5.3	4.9	5.1	5.5

SGD million		(a)	(b)	(c)	(d)	(e)
		31 Dec 2022	30 Sep 2022	30 Jun 2022	31 Mar 2022	31 Dec 2021
	Liquidity Coverage Ratio (SGD million / %)¹					
15	Total High Quality Liquid Assets	16,468	16,368	18,163	17,508	18,960
16	Total net cash outflow	11,608	12,410	14,093	13,936	14,227
17	Liquidity Coverage Ratio (%)	143	132	129	126	134
	Net Stable Funding Ratio (SGD million / %)²					
18	Total available stable funding	39,397	39,502	39,575	38,213	37,858
19	Total required stable funding	35,325	36,279	36,610	35,136	34,085
20	Net Stable Funding Ratio (%)	112	109	108	109	111

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. Please refer to MSL's website at https://www.maybank2u.com.sg/en/personal/about_us/maybank-singapore/regulatory-disclosure-maybank-singapore-limited.page for the LCR disclosures.

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). Data presented are as at the last day of respective quarter. Please refer to MSL's website at https://www.maybank2u.com.sg/en/personal/about_us/maybank-singapore/regulatory-disclosure.page for the NSFR half-yearly disclosures.

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 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%	23		
Luxembourg	0.50%	*		
Norway	2.00%	*		
Sweden	1.00%	*		
United Kingdom	1.00%	4		
Others		11,981		
Total		12,008	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	1,341	1,341	-	-	-	-
Singapore Government securities and treasury bills	2,288	2,288	-	-	-	-
Other government securities and treasury bills	134	134	-	-	-	-
Debts securities	199	199	-	-	-	-
Balances and placements with and loans to banks	170	170	-	-	-	-
Bills receivable	13	13	-	-	-	-
Loans and advances to non-bank customers	24,355	24,355	-	-	-	-
Amount due from related corporations	5,935	3,170	2,765	-	-	-
Other assets	209	120	89	-	89	-
Deferred tax assets	16	-	-	-	-	16
Intangible Assets	75	75	-	-	-	-
Right-of-use assets	39	39	-	-	-	-
Property and equipment	22	22	-	-	-	-
Total Assets	34,796	31,926	2,854	-	89	16

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	409	-	-	-	-	409
Deposits of non-bank customers	30,526	-	-	-	-	30,526
Bills payable	99	-	-	-	-	99
Amount due to related corporations	9	-	-	-	-	9
Current income tax payable	31	-	-	-	-	31
Other liabilities	268	-	89	-	89	179
Lease liabilities	40	-	-	-	-	40
Subordinated Notes	505	-	-	-	-	505
Debt securities issued	808	-	-	-	-	808
Total Liabilities	32,695	-	89	-	89	32,606

The sum of amounts disclosed under columns (b) to (f) for the above table may exceed the amounts disclosed under column (a) as some of the assets and liabilities are 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	34,796	31,926	2,854
2	Liabilities carrying amount under regulatory scope of consolidation ³	89	-	89
3	Total net amount under regulatory scope of consolidation	34,707	31,926	2,765
4	Off-balance sheet amounts		3,699	-
5	Differences due to derivatives and securities financing transaction		-	(2,436)
6	Differences due to consideration of provision		253	2
7	Other differences		(332)	-
8	Exposure amounts considered for regulatory purposes	35,877	35,546	331

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 included 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	1,341	
Singapore Government securities and treasury bills	2,288	
Other government securities and treasury bills	134	
Debts securities	199	
Balances and placements with and loans to banks	170	
Bills receivable	13	
Loans and advances to non-bank customers	24,355	
of which: Total allowances admitted as eligible T2 capital	110	a
Amount due from related corporations	5,935	
Other assets	209	
Deferred tax assets	16	b
Intangible Assets	75	
Right-of-use assets	39	
Property and equipment	22	
Total Assets	34,796	
Liabilities		
Amounts due to central bank	409	
Deposits of non-bank customers	30,526	
Bills payable	99	
Amount due to related corporations	9	
Current income tax payable	31	
Other liabilities	268	
Lease liabilities	40	
Subordinated Notes	505	
of which: Amount recognised in Tier 2 capital	500	c
Debt securities issued	808	
Total Liabilities	32,695	
Net Asset	2,101	

SGD million	Amount	Cross Reference to Section 5.2
Equity		
Share capital	2,000	
of which: Amount eligible as CET1 Capital	2,000	d
Total Reserve	101	
of which: Retained earnings	230	e
of which: Fair value adjustment reserve	(129)	f
Total Equity	2,101	

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	d
2	Retained earnings	230	e
3 [#]	Accumulated other comprehensive income and other disclosed reserves	(129)	f
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	2,101	
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	16	b
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	16	
29	Common Equity Tier 1 capital (CET1)	2,085	
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)	2,085	
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	500	c
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	110	a

SGD million		Amount	Cross Reference to Section 5.1
51	Tier 2 capital before regulatory adjustments	610	
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 (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)	610	
59	Total capital (TC = T1 + T2)	2,695	
60	Floor-adjusted total risk weighted assets	14,706	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	Common Equity Tier 1 CAR	14.2%	
62	Tier 1 CAR	14.2%	
63	Total CAR	18.3%	
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	6.2%	
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)	78	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	63	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	55	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	47	
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.	SGXZ25494378
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 2022	30 Sep 2022
Capital and Total exposures		
Tier 1 Capital	2,085	1,993
Total Exposures	37,129	37,520
Leverage ratio (%)		
Leverage ratio	5.6	5.3

6.2 Leverage Ratio Summary Comparison Table

SGD million		Amount
	Item	31 Dec 2022
1	Total consolidated assets as per published financial statements	34,796
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	160
5	Adjustment for SFTs	-
6	Adjustment for off-balance sheet items	2,189
7	Other adjustments	(16)
8	Exposure measure	37,129

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 2022 has increased 0.3 percentage points as compared to the previous quarter mainly due to higher Tier 1 capital. The ratio is well above the 3% regulatory minimum ratio prescribed by MAS, effective 1 January 2018.

SGD million		Amount	
	Item	31 Dec 2022	30 Sep 2022
	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)	31,931	32,479
2	Asset amounts deducted in determining Tier 1 capital	(16)	(22)
3	Total exposure measures of on-balance sheet items (excluding derivative transactions and SFTs)	31,915	32,457
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	137	146
5	Potential future exposure associated with all derivative transactions	121	117
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	258	263
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	2,767	2,633
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	-	15
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	Total SFT exposure measures	2,767	2,648
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	10,096	10,054
18	Adjustments for calculation of exposure measures of off-balance sheet items	(7,907)	(7,902)
19	Total exposure measures of off-balance sheet items	2,189	2,152
	Capital and Total exposures		
20	Tier 1 capital	2,085	1,993
21	Total exposures	37,129	37,520
	Leverage ratio		
22	Leverage ratio	5.6%	5.3%

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 the 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 necessary steps to identify, measure, control and monitor these risks.
Risk Management and Compliance Committee	Assists the BOD in the execution of its duties and responsibilities.
Executive-level Risk Management Committees	
Executive Risk Management Committee	Assists and supports 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
Macrotrends Impacting Risk Assessment (page 34)	Significant macro trends that impact the risk assessment of Maybank's businesses in operating countries.
Principal Risks (page 36)	Principal risks outlined along with actions taken to manage them.
Statement on Risk Management and Internal Control (page 106)	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, cyber and technology risk management frameworks and internal control system.

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)	Risk assessment under ICAAP policy, assessment of Pillar 1 and Pillar 2 risks and stress testing.
Risk Management (page 15)	Risk management framework, risk appetite, risk governance & oversight and independent group risk function

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 increase in credit RWA is mainly due to an increase in exposures to corporates as well as model updates for corporate portfolios under the IRBA, partially offset by a decrease in exposures to individuals.

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2022	30 Sep 2022	31 Dec 2022
1	Credit risk (excluding CCR)	13,137	13,013	1,314
2	of which: Standardised Approach	4,853	4,900	485
3	of which: F-IRBA	4,198	3,947	420
4	of which: supervisory slotting approach	-	-	-
5	of which: A-IRBA	4,087	4,166	409
6	CCR	205	212	21
7	of which: SA-CCR	183	198	18
8	of which: CCR internal models method	-	-	-
9	of which: other CCR	23	14	2
9a	of which: CCP	-	-	-
10	CVA	196	235	20
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 investment 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	4	*

SGD million		(a)	(b)	(c)
		RWA		Minimum capital requirements
		31 Dec 2022	30 Sep 2022	31 Dec 2022
21	of which: SA(MR)	5	4	*
22	of which: IMA	-	-	-
23	Operational risk	1,162	1,151	116
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	-	-	-
25	Floor adjustment	-	-	-
26	Total	14,706	14,616	1,471

* 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 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 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	104	24,529	266	13	51	202	24,368
2	Debt securities	-	2,621	*	-	*	-	2,620
3	Off-balance sheet exposures	-	10,048	1	-	*	1	10,047
4	Total	104	37,198	267	13	51	202	37,035

*Amount 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 2022
1	Defaulted loans and debt securities at end of the previous semi-annual reporting period	115
2	Loans and debt securities that have defaulted since the previous semi-annual reporting period	46
3	Returned to non-defaulted status	21
4	Amounts written-off	24
5	Other changes	(12)
6	Defaulted loans and debt securities at end of the semi-annual reporting period (1+2-3-4±5)	104

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 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 ("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 the 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 weaknesses 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)	(i)
	Singapore government securities & treasury bills	Other government treasury bills & securities	Debt securities	Balances and placements with and loans to banks	Amounts due from related corporations	Bills Receivable & Loans and advances to non-bank customers	Undrawn loan commitments	Contingent liabilities	Total
Singapore	2,288	-	199	-	5,915	23,740	9,145	237	41,524
India	-	-	-	-	-	2	*	-	3
Malaysia	-	-	-	-	-	181	179	*	359
China	-	-	-	-	-	428	56	-	483
Hong Kong	-	-	-	-	4	45	23	-	72
Others	-	134	-	170	18	238	297	*	857
Total	2,288	134	199	170	5,937	24,634	9,700	237	43,298

*Amount 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)	(h)	(i)
	Singapore government securities & treasury bills	Other government treasury bills & securities	Debt securities	Balances and placements with and loans to banks	Amounts due from related corporations	Bills Receivable & Loans and advances to non-bank customers	Undrawn loan commitments	Contingent liabilities	Total
Building and Construction	-	-	-	-	-	1,015	436	73	1,524
Financial institutions	-	-	-	170	5,937	1,713	794	5	8,618
Manufacturing	-	-	-	-	-	600	238	14	852
Transport, storage & communication	-	-	-	-	-	454	164	9	627
Government & public sector	2,288	134	199	-	-	-	-	-	2,621
Housing & bridging loans	-	-	-	-	-	12,555	1,953	-	14,509
General commerce	-	-	-	-	-	1,915	1,104	112	3,130
Professional and private individuals	-	-	-	-	-	5,313	4,730	5	10,048
Others	-	-	-	-	-	1,069	281	19	1,370
Total	2,288	134	199	170	5,937	24,634	9,700	237	43,298

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

SGD million	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Less than 1 month	More than 1 month to 3 months	More than 3 months to 6 months	More than 6 months to 12 months	More than 1 year to 5 years	More than 5 years	Total
Singapore Government treasury bills and securities	334	166	49	98	1,155	486	2,288
Other government treasury bills & securities	-	-	-	-	134	-	134
Debt securities	-	-	-	-	98	101	199
Balances and placements with and loans to banks	170	-	-	-	-	-	170
Amounts due from related corporations	3,495	1,226	508	408	300	-	5,937
Bills Receivable & Loans and advances to non-bank customers	2,037	430	199	273	4,418	17,277	24,634
Undrawn loan commitments	6,103	257	356	417	336	2,231	9,700
Contingent liabilities	81	30	25	36	65	*	237
Total	12,220	2,109	1,137	1,230	6,507	20,095	43,298

*Amount is less than 0.5

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	104	62	41
India	-	-	*
Malaysia	*	*	3
China	*	*	-
Total	104	62	44

*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	39	20	14
Financial Institutions	*	*	-
Manufacturing	4	1	1
Transport, storage & communication	2	1	1
Housing & bridging loans	12	2	-
General commerce	34	30	10
Professional and private individuals	9	5	15
Others	5	3	3
Total	104	62	44

*Amount is less than 0.5

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 2022
Less than 30 days	196
30 days to less than 90 days	100
90 days and more	*
Total	297

*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 2022
Impaired	12
Non-impaired	19
Total	31

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. A 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 their 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.

The movements of loans and debt securities balances in the second half of 2022 were in line with overall balance sheet changes.

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	4,589	19,779	18,404	1,376	-
2	Debt securities	2,620	-	-	-	-
3	Total	7,209	19,779	18,404	1,376	-
4	Of which: defaulted	13	22	21	*	-

*Amount is less than 0.5

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).

RWA decreased in the second half of 2022 mainly due to recognition of credit risk mitigation under the government risk participation schemes.

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	97	-	97	-	-	0%
2	Central government and central bank	3,667	-	3,667	-	-	0%
3	PSE	198	-	1,350 ^a	8	-	0%
4	MDB	-	-	-	-	-	-
5	Bank	3,418	110	3,418	7	1,053	31%
6	Corporate	549	486	499 ^a	80	579	100%
7	Regulatory retail	2,919	2,386	2,107 ^a	136	1,682	75%
8	Residential mortgage	488	29	488	8	177	36%
9	CRE	738	60	736	25	761	100%
10	Equity - SA(EQ)	-	-	-	-	-	-
11	Past due exposures	8	5	8	2	13	131%
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	658	466	525	63	588	100%
14	Total	12,740	3,542	12,894	330	4,853	37%

^a Corporate (including those under FIRB) and regulatory retail exposures which have credit risk mitigation under the government risk participation schemes are reported in the PSE asset class.

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.

Exposures decreased marginally in the second half of 2022. Decrease in exposures in central government and central bank asset class were offset by higher exposures to PSE asset class due to recognition of credit risk mitigation under the government risk participation schemes.

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	97	-	-	-	-	-	-	-	-	97
2	Central government and central bank	3,667	-	-	-	-	-	-	-	-	3,667
3	PSE	1,359	-	-	-	-	-	-	-	-	1,359
4	MDB	-	-	-	-	-	-	-	-	-	-
5	Bank	-	-	2,198	-	1,227	-	-	-	-	3,425
6	Corporate	-	-	-	-	-	-	579	-	-	579
7	Regulatory retail	-	-	-	-	-	2,243	-	-	-	2,243
8	Residential mortgage	-	-	-	490	-	1	5	-	-	495
9	CRE	-	-	-	-	-	-	761	-	-	761
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	-	-
11	Past due exposures	-	-	-	-	-	-	4	6	-	10
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	588	-	-	588
14	Total	5,122	-	2,198	490	1,227	2,244	1,936	6	-	13,223

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 compared to a normal economic period. LGD during a crisis period, 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 subjected 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 as:

- **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.
- **Shadow Rating Approach**
This approach is usually applied when there are few or no default data available but a large number of borrowers is externally rated. The objective of this methodology is to replicate the risk rating applied by the external rating agencies.
- **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 the 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 reputation.

To manage this risk, a 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 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 practice, 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 the 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	67	103	5%	57	0.09%	53	37%	3.8	18	31%	*	
0.15 to < 0.25	93	75	14%	90	0.20%	39	37%	3.4	40	45%	*	
0.25 to < 0.50	418	300	13%	419	0.33%	164	40%	3.7	284	68%	1	
0.50 to < 0.75	211	96	16%	211	0.55%	79	40%	3.9	180	86%	*	
0.75 to < 2.50	1,310	741	17%	1,328	1.40%	412	42%	3.5	1,557	117%	8	
2.50 to < 10.00	517	260	17%	499	4.20%	197	39%	3.2	683	137%	8	
10.00 to < 100.00	158	124	5%	133	14.49%	748	39%	2.7	265	199%	7	
100.00 (Default)	54	29	-	52	100.00%	33	42%	3.9	-	-	22	
Sub-total	2,829	1,729	14%	2,788	4.07%	1,725	40%	3.5	3,027	109%	46	84
Corporate Small Business												
0.00 to < 0.15	21	63	5%	23	0.12%	26	41%	2.2	6	24%	*	
0.15 to < 0.25	8	28	27%	13	0.20%	17	43%	3.7	6	45%	*	
0.25 to < 0.50	186	105	13%	185	0.36%	65	42%	3.6	140	75%	*	
0.50 to < 0.75	50	64	13%	52	0.55%	32	37%	3.6	33	62%	*	
0.75 to < 2.50	517	320	13%	486	1.51%	217	42%	3.7	507	104%	3	
2.50 to < 10.00	294	124	6%	258	4.62%	86	42%	3.2	345	133%	5	
10.00 to < 100.00	106	17	5%	80	15.59%	46	40%	2.9	136	170%	5	
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	1,182	721	11%	1,097	2.98%	489	42%	3.5	1,171	107%	13	18
Total (all portfolios)	4,011	2,450	13%	3,885	3.77%	2,214	41%	3.5	4,198	108%	60	102

*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.

RWA decreased in the second half of 2022 mainly due to decrease in exposures to individuals.

	(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	52	11	100%	64	0.13%	96	22%		5	7%	*	
0.15 to < 0.25	1,976	89	100%	2,064	0.22%	6,047	23%		214	10%	1	
0.25 to < 0.50	5,970	397	100%	6,366	0.36%	10,120	23%		933	15%	5	
0.50 to < 0.75	3,600	606	100%	4,205	0.57%	4,435	22%		858	20%	5	
0.75 to < 2.50	777	299	100%	1,076	1.35%	1,302	23%		384	36%	3	
2.50 to < 10.00	444	144	100%	588	3.59%	657	22%		380	65%	5	
10.00 to < 100.00	25	-	-	25	20.90%	72	23%		33	131%	1	
100.00 (Default)	12	-	-	12	100.00%	28	26%		26	212%	1	
Sub-total	12,855	1,545	100%	14,401	0.73%	22,567	22%		2,832	20%	22	45
Qualifying Revolving Retail												
0.00 to < 0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to < 0.25	*	2	64%	1	0.24%	102	90%		*	12%	*	
0.25 to < 0.50	95	875	60%	617	0.37%	65,005	90%		103	17%	2	
0.50 to < 0.75	43	563	62%	392	0.58%	32,505	90%		94	24%	2	
0.75 to < 2.50	150	901	57%	659	1.26%	65,810	90%		281	43%	7	
2.50 to < 10.00	30	156	56%	116	4.48%	12,371	90%		123	105%	5	
10.00 to < 100.00	16	38	47%	34	18.18%	3,448	90%		75	217%	6	
100.00 (Default)	4	3	100%	7	100.00%	348	90%		10	133%	6	
Sub-total	339	2,538	59%	1,827	1.74%	179,588	90%		686	38%	28	13

*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	246	-	-	246	0.11%	9,948	33%		22	9%	*	
0.15 to < 0.25	363	-	-	363	0.19%	10,896	35%		53	15%	*	
0.25 to < 0.50	1,085	10	58%	1,091	0.44%	25,202	37%		284	26%	2	
0.50 to < 0.75	106	3	50%	108	0.60%	2,000	38%		35	32%	*	
0.75 to < 2.50	359	5	41%	361	1.17%	7,467	38%		150	42%	2	
2.50 to < 10.00	36	3	51%	38	3.46%	772	41%		23	61%	1	
10.00 to < 100.00	2	*	8%	2	17.36%	66	39%		2	80%	*	
100.00 (Default)	1	*	100%	1	100.00%	15	75%		1	133%	*	
Sub-total	2,199	21	52%	2,210	0.59%	56,145	36%		569	26%	5	9
Total (all portfolios)	15,393	4,104	74%	18,438	0.81%	239,554	31%		4,087	22%	55	67

*Amount is less than 0.5

As at 31 December 2022, the bank does not recognise credit derivatives as a credit risk mitigant under the F-IRBA or A-IRBA.

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 increased by S\$172 million quarter-on-quarter mainly due to higher RWA from model updates for corporate portfolios under the IRBA.

SGD million		(a)
		RWA amounts
1	RWA as at end of previous quarter	8,113
2	Asset size	86
3	Asset quality	(111)
4	Model updates	208
5	Methodology and policy	-
6	Acquisitions and disposals	-
7	Foreign exchange movements	(11)
8	Other	-
9	RWA as at end of quarter	8,285

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	0.10%	0.12%	98	79	-	-	0.43%
0.15 to < 0.25	A-	A-	A3	0.20%	0.20%	64	56	-	-	0.81%
0.25 to < 0.50	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.34%	0.34%	276	231	-	-	0.68%
0.50 to < 0.75	BBB-	BBB-	Baa3	0.55%	0.55%	139	113	-	-	0.97%
0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.43%	1.48%	615	633	3	-	0.89%
2.50 to < 10.00	B to CCC	B to CCC	B2 to Caa2	4.35%	4.46%	221	283	3	-	3.91%
10.00 to < 100.00	CCC- to C	CCC- to C	Caa3 to Ca	14.90%	15.68%	392	371	3	-	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%	166	97	-	-	0.00%
0.15 to < 0.25				0.22%	0.22%	6,058	6,047	-	-	0.05%
0.25 to < 0.50				0.36%	0.35%	10,539	10,123	3	-	0.08%
0.50 to < 0.75				0.57%	0.57%	4,594	4,437	-	-	0.11%
0.75 to < 2.50				1.35%	1.37%	1,306	1,305	2	-	0.42%
2.50 to < 10.00				3.59%	3.71%	693	657	2	-	2.04%
10.00 to < 100.00				20.90%	22.01%	58	72	4	-	15.43%
QRRE asset sub-class										
0.00 to < 0.15				-	-	-	-	-	-	0.00%
0.15 to < 0.25				0.24%	0.24%	58	102	-	-	0.03%
0.25 to < 0.50				0.37%	0.37%	57,517	65,007	22	-	0.15%
0.50 to < 0.75				0.58%	0.59%	31,635	32,505	25	-	0.45%
0.75 to < 2.50				1.26%	1.27%	77,068	65,829	356	-	0.67%
2.50 to < 10.00				4.48%	4.40%	13,610	12,371	84	-	1.70%
10.00 to < 100.00				18.18%	17.42%	3,204	3,457	181	-	9.27%
Other retail exposures asset sub-class										
0.00 to < 0.15				0.11%	0.10%	12,625	9,948	2	-	0.03%
0.15 to < 0.25				0.19%	0.19%	14,252	10,896	4	-	0.07%
0.25 to < 0.50				0.44%	0.44%	20,266	25,202	2	-	0.15%
0.50 to < 0.75				0.60%	0.61%	2,339	2,000	2	1	0.69%

(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				1.17%	1.16%	6,856	7,467	7	1	1.06%
2.50 to < 10.00				3.46%	3.55%	938	772	11	-	2.37%
10.00 to < 100.00				17.36%	17.45%	77	66	2	-	16.50%

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 to the bank’s Credit Rating Policy and the applications are subject to independent credit assessments by Credit Management Singapore (“CMS”) or Group Trading Room Credit (“GTRC”). 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.

The higher RWA in the second half of 2022 was mainly from increase in derivative exposures.

SGD million		(a)	(b)	(c)	(d)	(d.1)	(e)	(f)
		Replacement cost	Potential future exposure	Effective EPE	Fixed alpha factor, α used for computing regulatory EAD	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	SA-CCR (for derivatives)	98	57		1.4		218	183
2	CCR internal models method (for derivatives and SFTs)			-		-	-	-
3	FC(SA) (for SFTs)						-	-
4	FC(CA) (for SFTs)						113	23
5	VaR for SFTs						-	-
6	Total							205

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.

The increase in CVA RWA in the second half of 2022 is in line with increased derivative exposures.

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	218	196
4	Total portfolios subject to the CVA risk capital requirement	218	196

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.

The increase in exposures in the second half of 2022 were mainly from Bank asset class and other exposures.

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	-	-	125	47	-	-	-	-	172
Corporate	-	-	-	-	-	*	-	-	*
Regulatory retail	-	-	-	-	-	-	-	-	-
Other exposures	-	-	-	-	-	153	-	-	153
Total	-	-	125	47	-	153	-	-	325

*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	*	0.10%	5	45%	1.00	*	20%
0.15 to < 0.25	*	0.20%	1	45%	1.00	*	32%
0.25 to < 0.50	*	0.33%	8	45%	1.00	*	44%
0.50 to < 0.75	*	0.55%	2	45%	1.00	*	58%
0.75 to < 2.50	2	1.53%	12	45%	1.00	2	92%
2.50 to < 10.00	*	3.53%	5	45%	1.00	*	123%
10.00 to < 100.00	*	22.06%	2	45%	1.00	*	241%
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	3	1.46%	35	45%	1.00	2	74%
Corporate Small Business							
0.00 to < 0.15	*	0.08%	3	45%	1.00	*	15%
0.15 to < 0.25	*	0.20%	1	45%	1.00	*	25%
0.25 to < 0.50	1	0.34%	6	45%	1.00	*	39%
0.50 to < 0.75	1	0.55%	3	45%	1.00	*	53%
0.75 to < 2.50	*	0.88%	5	45%	1.00	*	68%
2.50 to < 10.00	1	3.61%	6	45%	1.00	1	106%
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	3	1.45%	24	45%	1.00	2	65%
Total (sum of portfolios)	6	1.45%	59	45%	1.00	4	70%

*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.

The decrease in collateral posted and received for SFTs in the second half of 2022 was in line with the decrease in reverse repurchase transactions.

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	-	-	-	-	-	1,280
Cash - other currencies	-	-	-	-	-	1,487
Domestic sovereign debt	-	-	-	-	1,273	-
Other sovereign debt	-	-	-	-	474	-
Government agency debt	-	-	-	-	596	-
Corporate bonds	-	-	-	-	272	-
Equity securities	-	-	-	-	-	-
Other collateral	-	-	-	-	161	-
Total	-	-	-	-	2,777	2,767

29 CREDIT DERIVATIVE EXPOSURES

The bank does not have credit derivative exposure as at 31 December 2022.

30 EXPOSURE TO CENTRAL COUNTERPARTIES

The bank does not have exposure to central counterparties as at 31 December 2022.

31 SECURITISATION

The bank does not have securitisation exposure as at 31 December 2022.

32 QUALITATIVE DISCLOSURES RELATED TO MARKET RISK

The bank does not have a trading book as of 31 December 2022.

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 to 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 premised on 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 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, the Operational Risk Management unit provides oversight and ongoing monitoring and reviewing 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 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 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 and US Dollar are the key material currencies within the banking book portfolio as of December 2022. 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 2022, across the rate shock scenarios prescribed by MAS Notice 637, the bank would experience the worst-case maximum impact of SGD76 million towards its economic value under the Steeper Interest Rate Shock Scenario.

36 REMUNERATION

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

The bank has in place a comprehensive Total Rewards system which is a strategic human capital component embedded with sustainability considerations of the integrated Talent Management framework that guides the bank 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, it 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. To uphold the bank's Environmental, Social and Governance ("ESG") commitments, ESG is embedded in various aspects of its Total Rewards management through proper governance, performance measurement standards and prudent risk management considerations.

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 talents 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, namely 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 the fixed and variable components that will change according to the performance of the Group, business/corporate function and individual.

Component	Purpose
Fixed Pay	Attract and retain talents by providing competitive and equitable level of pay. Reviewed annually through internal and external benchmarking against relevant peers/locations, with consideration of market dynamics, differences in

Component	Purpose
	individual responsibilities, functions/roles, performance levels, achievements, skillsets, as well as competency levels.
Variable Bonus	<p><u>Variable Bonus</u></p> <p>a) Reinforce a pay-for-performance culture and adherence to Maybank Group's Core Values, TIGER.</p> <p>b) Variable cash award design that is aligned with the risk management and long-term performance goals of the Group through deferral and claw-back policies.</p> <p>c) Based on the overall performance of the Group, business/corporate function and individual.</p> <p>d) Premised on the Balanced Scorecard ("BSC") approach (comprising financial and non-financial KPIs) that is tailored to drive the desired behaviour and performance levels in creating long-term shareholder value.</p> <p><u>Long-term Incentive Award</u></p> <p>Offered to eligible talents 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></p> <p>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></p> <p>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

Employee benefits are integral to the bank's Total Rewards management, along with the integration of ESG values and M25+ objectives. Maybank's benefits programme provides financial protection, healthcare benefits, paid time-off, employee loans at preferential rates and other benefits that support work-life integration. These are reviewed periodically and benchmarked

against industry practices and evolving trends within the rapidly changing business environment. The bank embraces a holistic way of working that embeds sustainability considerations to cater to employees' physical, mental and emotional well-being as well as their financial, social and career needs.

36.1.3 Development and Career Opportunities

In line with the bank's strong learning culture, the bank continue to deploy best-in-class learning and development programme to nurture its employees at all levels in a multitude of flexible or customisable development programmes for long-term relevance, competitive advantage and growth. Employees are 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, Maybank rolled out the Employees' Share Grant Plan ("ESGP") under the Long-Term Incentive Award to replace a previous scheme that has expired in June 2018. The ESGP is valid for seven years and it serves as a long-term incentive for eligible talents and senior management.

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

Senior management and material risk personnel are however eligible to participate in the Cash-settled Performance-based Employees' Share 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 and second ESGP / CESGP Award that were granted in December 2018 and September 2019 were vested in December 2021 and September 2022 respectively. The third ESGP / CESGP Award which was granted in September 2020 will vest in 2023, the fourth ESGP / CESGP Award which was granted in September 2021 will vest in 2024, and the fifth ESGP / CESGP Award granted in September 2022 will vest in 2025.

In FY2022, the CESGP was awarded to the senior management and material risk personnel of which the cash payment based on the value of 461,000 units and 640,000 units of Maybank shares awarded

to the senior management and material risk personnel respectively. This payment will be made to the employees by 2025, and is conditional upon the employees fulfilling the payment criteria⁵.

36.3 Governance & Controls - Remuneration Practices

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 are 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 Material Risk Personnel ("MRP") 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 Material Risk Personnel

The bank's key executives comprise senior management who by virtue of their roles and responsibilities would be classified as material risk personnel. These are individual employees or a group of employees collectively involved in strategic decision making, and they are accountable for the bank's performance and risk profile.

Material risk personnel 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 material risk personnel are reviewed annually and submitted to the Maybank Group Nomination and Remuneration Committee ("NRC") for recommendation to the Board for approval.

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.

36.5 Remuneration Awarded During the Financial Year

Category		(a)	(b)
		Senior Management	Material Risk Personnel
	Fixed remuneration		
1	Number of employees	12	72
2	Total fixed remuneration (row 3 + row 5 + row 7)	56.5%	65.6%
3	of which: cash-based	54.9%	65.5%
4	of which: deferred	-	-
5	of which: shares and other share-linked instruments	-	-
6	of which: deferred	-	-
7	of which: other forms of remuneration	1.6%	0.1%
8	of which: deferred	-	-
	Variable remuneration		
9	Number of employees	12	66
10	Total variable remuneration (row 11 + row 13 + row 15)	43.5%	34.4%
11	of which: cash-based	35.7%	30.1%
12	of which: deferred	6.7%	3.3%
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 Material Risk Personnel	-	-	-	-	-	-

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	6.7%	-	-	-	6.7%
2	Shares	-	-	-	-	-
3	Share-linked instruments	-	-	-	-	-
4	Other	-	-	-	-	-
Material Risk Personnel						
5	Cash	3.3%	-	-	-	3.3%
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
BSC	Balanced Scorecard
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
ESG	Environmental, Social and Governance
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
GTRC	Group Trading Room Credit
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

Abbreviations	Brief Description
MAS	Monetary Authority of Singapore
MDB	Multilateral Development Bank
MRM	Model Risk Management
MRP	Material Risk Personnel
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
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