

Oversea-Chinese Banking Corporation Limited

**Pillar 3 Disclosures
(OCBC Group – As at 31 December 2017)**



Incorporated in Singapore
Company Registration Number: 193200032W

Attestation Statement Pursuant to Monetary Authority of Singapore (“MAS”) Notice 637 on Risk Based Capital Adequacy Requirements – Disclosure Requirements (Pillar 3)

On behalf of the Board of Directors (“Board”), we are satisfied that the disclosures in this report have been prepared in accordance with the internal control processes approved by the Board for public disclosures.



Darren Tan
Chief Financial Officer
14 February 2018

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1. INTRODUCTION

This document presents the information in accordance with Pillar 3 (“P3”) disclosure requirements under Monetary Authority of Singapore (“MAS”) Notice 637 on Risk Based Capital Adequacy Requirements for banks incorporated in Singapore. The P3 requirements specify reporting templates for most of the quantitative disclosures to enable market participants to better compare the capital adequacy and risk profile across banks via improved consistency in public disclosure.

For purpose of the year-end disclosure for OCBC Group (“Group”) as at 31 December 2017, explanations of the drivers behind significant differences between reporting periods for the respective sections are provided where appropriate. The disclosure on the RWA flow statements for the following are omitted as there is no exposure treated under these approaches:

- Counterparty Credit Risk (“CCR”) under the Internal Models Method (“IMM”)
- Market Risk exposures under the Internal Models Approach (“IMA”)

As part of enhanced public disclosures on risk profile and capital adequacy driven by changes in Part XI of MAS Notice 637, the Group’s disclosure policy, which outlines the Group’s approach and internal controls on the preparation of the required information for public disclosures to ensure their accuracy and completeness, has been reviewed and updated.

2. ACCOUNTING AND REGULATORY CONSOLIDATION

The consolidation basis used for regulatory capital computation is similar to that used for financial reporting except for the following:

- Great Eastern Holdings Limited and its insurance subsidiaries are excluded from regulatory consolidation and are treated as investments in unconsolidated major stake companies that are financial institutions in accordance with MAS Notice 637 amended definition of insurance subsidiary. The regulatory adjustments applied to these investments are in accordance with MAS Notice 637 paragraphs 6.1.3(p), 6.2.3(e) and 6.3.3(e).
- As at 31 December 2017, the total equity of these insurance subsidiaries was S\$8 billion and total assets were S\$84 billion.

Disclosures on the Group’s reconciliation of regulatory capital and regulatory capital position can be found in Section 4 of this document.

3. CAPITAL ADEQUACY

3.1 Capital Adequacy and G-SIB Information

Disclosures on the Group's capital adequacy ratios and the capital positions for the Group's significant banking subsidiaries as at 31 December 2017 are presented in the Capital Adequacy Ratios section of the Financial Year 2017 Financial Results (<http://www.ocbc.com/group/investors/index.html>).

The Basel Committee has developed an indicator-based measurement approach to identify Global Systemically Important Bank (G-SIB) and determine the higher loss absorbency requirements for banks classified as G-SIBs. While OCBC is not a G-SIB, it is required under MAS Notice 637 to disclose the indicators which can be found on the Bank's Investor Relations website (http://www.ocbc.com/group/investors/Cap_and_Reg_Disclosures.html).

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

The following table provides an overview of the Group's geographical distribution of private sector credit exposures for the calculation of countercyclical buffer.

The geographical distribution is based on the country where the physical collateral resides in, residence of the guarantor, or in the absence of such mitigant, the country of obligor (i.e. the country where the majority of the obligor's operating assets is situated) in accordance with MAS Notice 637 requirements.

Higher RWA in Hong Kong during the second half of 2017 was mainly driven by increase in loans that was partially offset by the adoption of IRB Approach of Margin Lending portfolio.

	(a) Country-Specific countercyclical buffer requirement %	(b) RWA for private sector credit exposures S\$ million	(c) Bank-specific countercyclical buffer requirement ^{1/} %	(d) Countercyclical buffer amount S\$ million
Geographical breakdown				
Hong Kong	1.25%	18,763		
Sweden	1.25%	2		
Sub-total		18,765		
Total		138,041	0.17%	328

^{1/} The Bank-specific countercyclical buffer is the additional capital which needs to be maintained above the Regulatory minimum and Capital Conservation buffer requirement

4. COMPOSITON OF CAPITAL

4.1 Reconciliation of Regulatory Capital

	Balance sheet as per published financial statements	Under regulatory scope of consolidation	Cross Reference to Section 4.2
S\$'m			
EQUITY			
Share capital	15,136		
of which: Paid-up ordinary shares		14,136	a
of which: Transitional: Ineligible AT1 capital instruments		1,448	b
Other equity instruments	499	499	c
Reserves:			
Capital reserves	361		
Fair value reserves	120		
Revenue reserves	22,892		
Total reserves	23,373		
of which: Retained earnings		17,556	d
of which: Accumulated other comprehensive income and other disclosed reserves		365	e
Non-controlling interests	2,768		
of which: Transitional: Ineligible AT1 capital instruments		949	f
of which: Minority interest that meets criteria for inclusion in CET1 Capital		209	g
of which: Minority interest that meets criteria for inclusion in AT1 Capital		30	h
Valuation adjustments	-	0	
Total equity	41,776		
LIABILITIES			
Deposits of non-bank customers	283,642		
Deposits and balances of banks	7,485		
Due to associates	220		
Trading portfolio liabilities	622		
Derivative payables	6,454		
Other liabilities	6,065		
Current tax	1,102		
Deferred tax	1,582		
of which: Associated with intangible assets		59	i
Debt issued	32,235		
of which: AT1 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion		59	j
of which: T2 capital instruments		2,688	k
of which: Transitional: Ineligible T2 capital instruments		1,337	l
of which: T2 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion		18	m
Life assurance fund liabilities	73,755		
Total liabilities	413,162		
Total equity and liabilities	454,938		
ASSETS			
Cash and placements with central banks	19,594		
Singapore government treasury bills and securities	9,840		
Other government treasury bills and securities	17,631		
Placements with and loans to banks	49,377		
Loans and bills receivable	234,141		
of which: Eligible provision for inclusion in T2 Capital subject to cap in respect of exposures under SA and IRBA		630	n
Debt and equity securities	25,329		
of which: Indirect investments in own Tier 2 instruments		0	o
of which: Investments in unconsolidated major stake financial institutions		759	p
of which: Investments in unconsolidated non major stake financial institutions		585	q
Investments in insurance subsidiaries		1,953	r
Derivative and forward securities in unconsolidated non major stake financial institutions		17	s
Assets pledged	1,056		
Assets held for sale	39		
of which: Investments in unconsolidated major stake financial institutions		33	t
Derivative receivables	6,386		
Other assets	5,651		
Deferred tax	174		
of which: Deferred tax assets before netting		331	u
Associates and joint ventures	2,352		
of which: Investments in unconsolidated major stake financial institutions		2,149	v
Property, plant and equipment	3,332		
Investment properties	949		
Goodwill and intangible assets	5,160		
of which: Goodwill		3,992	w
of which: Intangible assets		396	x
Life assurance fund investment assets	73,927		
Total assets	454,938		

There were no significant changes over the semi-annual reporting period except for the adoption of the amended definition of insurance subsidiary in accordance with MAS Notice 637 with effect from December 2017.

Great Eastern Holdings and its insurance subsidiaries were excluded from regulatory consolidation and such investments were accounted for at cost.

4.2 Regulatory Capital Position

S\$'m

	Amount	Amount subject to Pre-Base III Treatment	Cross Reference to Section 4.1
Common Equity Tier 1 capital: instruments and reserves			
1 Paid-up ordinary shares and share premium (if applicable)	14,136		a
2 Retained earnings	17,556		d
3 Accumulated other comprehensive income and other disclosed reserves	365		e
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	209	(27)	g
6 Common Equity Tier 1 capital before regulatory adjustments	32,267		
Common Equity Tier 1 capital: regulatory adjustments			
7 Valuation adjustment pursuant to Part VIII of MAS Notice 637	0		
8 Goodwill, net of associated deferred tax liability	3,194	798	w
9 Intangible assets, net of associated deferred tax liability	269	67	x-i
10 Deferred tax assets that rely on future profitability	265	66	u
11 Cash flow hedge reserve	(0)	(0)	
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)	1,632	408	(p+r+t+v) - 2,854 ¹
20 Mortgage servicing rights (amount above 10% threshold)			
21 Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)			
22 Amount exceeding the 15% threshold	-	-	
23 of which: investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	-	
24 of which: mortgage servicing rights	-	-	
25 of which: deferred tax assets arising from temporary differences	-	-	
26 National specific regulatory adjustments	-	-	
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	5,360		
29 Common Equity Tier 1 capital (CET1)	26,907		
Additional Tier 1 capital: instruments			
30 AT1 capital instruments and share premium (if applicable)	499		c
31 of which: classified as equity under the Accounting Standards	499		
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)	2,397		(b+f) ²
34 AT1 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	89		h+j
35 of which: instruments issued by subsidiaries subject to phase out	59		j
36 Additional Tier 1 capital before regulatory adjustments	2,985		
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	932		
41A Regulatory adjustments applied to AT1 Capital in respect of amounts subject to pre-Base III treatment	932		
of which: Goodwill, net of associated deferred tax liability	798		
of which: Intangible assets, net of associated deferred tax liability	67		
of which: Deferred tax assets that rely on future profitability	66		
of which: Cash flow hedge reserve	(0)		
of which: Increase in equity capital resulting from securitisation transactions	-		
of which: Unrealised fair value gains/losses on financial liabilities and derivative liabilities arising from changes in own credit risk	-		
of which: Shortfall of TEP relative to EL under IRBA	-		
of which: PE/VC investments held beyond the relevant holding periods set out in MAS Notice 630	-		
of which: Capital deficits in subsidiaries and associates that are regulated financial institutions	-		
of which: Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (incl insurance subsidiaries)	-		
of which: Investments in Tier 2 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (incl insurance subsidiaries)	-		
41B Any other items 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	932		
44 Additional Tier 1 capital (AT1)	2,053		
45 Tier 1 capital (T1 = CET1 + AT1)	28,960		

4.2 Regulatory Capital Position (Continued)

S\$'m

	Amount	Amount subject to Pre-Basel III Treatment	Cross Reference to Section 4.1
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	2,688	k
47	Transitional: Ineligible capital instruments (pursuant to paragraphs 6.5.3 and 6.5.4)	1,337	l ²
48	Tier 2 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	18	m
49	of which: instruments issued by subsidiaries subject to phase out	0	
50	Provisions	630	n
51	Tier 2 capital before regulatory adjustments	4,673	
Tier 2 capital: regulatory adjustments			
52	Investments in own Tier 2 instruments	0	o
53	Reciprocal cross-holdings in Tier 2 capital instruments of financial institutions	-	
54	Investments in Tier 2 capital instruments of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
55	Investments in Tier 2 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
56	National specific regulatory adjustments	408	
56A	Any other items which the Authority may specify	-	
56B	Regulatory adjustments applied to Tier 2 Capital in respect of amounts subject to pre-Basel III treatment	408	
	of which: Shortfall of TEP relative to EL under IRBA	-	
	of which: PE/VC investments held beyond the relevant holding periods set out in MAS Notice 630	-	
	of which: Capital deficits in subsidiaries and associates that are regulated financial institutions	-	
	of which: Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (incl insurance subsidiaries)	408	
	of which: Investments in AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (incl insurance subsidiaries)	-	
57	Total regulatory adjustments to Tier 2 capital	408	
58	Tier 2 capital (T2)	4,264	
59	Total capital (TC = T1 + T2)	33,225	
60	Floor-adjusted total risk weighted assets (after incorporating the floor adjustment set out in Table 11-3A(m))	193,082	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	Common Equity Tier 1 CAR	13.9%	
62	Tier 1 CAR	14.9%	
63	Total CAR	17.2%	
64	Bank-specific buffer requirement	7.9%	
65	of which: capital conservation buffer requirement	1.25%	
66	of which: bank specific countercyclical buffer requirement	0.2%	
67	of which: G-SIB buffer requirement (if applicable)	-	
68	Common Equity Tier 1 available to meet buffers	7.2%	
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 and Tier 2 capital of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	602	q+s
73	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	2,854	Refer to note ¹
74	Mortgage servicing rights (net of related tax liability)	-	
75	Deferred tax assets arising from temporary differences (net of related 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)	378	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	513	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	253	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	641	
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	2,477	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	155	
84	Current cap on T2 instruments subject to phase out arrangements	2,246	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

^{1/} The investments in the ordinary shares of unconsolidated major stake companies that are financial institutions which are within the prescribed threshold amount in accordance with MAS Notice 637 paragraph 6.1.3 (p)(iii)

^{2/} Under Basel III transitional arrangements, outstanding Additional Tier 1 and Tier 2 capital instruments that do not meet the requirements are gradually phased out. Fixing the base at the nominal amount of such instruments outstanding at 1 January 2013, the recognition shall be capped at 90% in 2013, with the cap reducing by 10 percentage points in each subsequent year. To the extent a capital instrument is redeemed or amortised after 1 January 2013, the nominal amount serving as the base is not reduced

4.3 Main Features of Capital Instruments

The following disclosures are made pursuant to the requirements of MAS Notice 637 Annex 11D. They are not a summary of the terms, do not purport to be complete, and should be read in conjunction with, and are qualified in their entirety by, the relevant Terms and Conditions available on the Bank's Investor Relations website (http://www.ocbc.com/group/investors/Cap_and_Reg_Disclosures.html).

	OCBC Ordinary Shares	OCBC 3.8% Non-cumulative Non-convertible Perpetual Capital Securities
1. Issuer	Oversea-Chinese Banking Corporation Limited	Oversea-Chinese Banking Corporation Limited
2. Unique identifier (ISIN)	SG1S04926220	SG6YJ3000003
3. Governing law(s) of instrument	Singapore	Singapore
<i>Regulatory treatment</i>		
4. Transitional Basel III rules	Common Equity Tier 1	Additional Tier 1
5. Post-transitional Basel III rules	Common Equity Tier 1	Additional Tier 1
6. Eligible at Solo / Group / Solo and Group	Solo and Group	Solo and Group
7. Instrument type	Ordinary shares	Perpetual Capital Securities
8. Amount recognised in regulatory capital	S\$14,136 million	S\$499 million
9. Par value of instrument	NA	S\$500 million
10. Accounting classification	Shareholders' equity	Shareholders' equity
11. Original date of issuance	NA	25 Aug 2015
12. Perpetual or dated	Perpetual	Perpetual
13. Original maturity date	No maturity	No maturity
14. Issuer call subject to prior supervisory approval	No	Yes
15. Optional call date, contingent call dates and redemption amount	NA	On or after the First Reset Date of 25 Aug 2020 (at par) Tax call (at par) Regulatory call (at par)
16. Subsequent call dates, if applicable	NA	Optional call dates - any date after the First Reset Date
<i>Coupons / dividends</i>		
17. Fixed or floating dividend / coupon	NA	Fixed to fixed
18. Coupon rate and any related index	NA	3.8% p.a. up to (but excluding) 25 August 2020; if not redeemed, the distribution rate will be reset every 5 years thereafter to a fixed rate equal to the then prevailing 5-year SGD SOR plus 1.51% p.a.
19. Existence of a dividend stopper	NA	Yes
20. Fully discretionary, partially discretionary or mandatory	NA	Fully discretionary
21. Existence of step up or other incentive to redeem	NA	No
22. Noncumulative or cumulative	NA	Noncumulative
23. Convertible or non-convertible	NA	Nonconvertible
24. If convertible, conversion trigger(s)	NA	NA
25. If convertible, fully or partially	NA	NA
26. If convertible, conversion rate	NA	NA
27. If convertible, mandatory or optional conversion	NA	NA
28. If convertible, specify instrument type convertible into	NA	NA
29. If convertible, specify issuer of instrument it converts into	NA	NA
30. Write-down feature	No	Yes
31. If write-down, write-down trigger(s)	NA	The earlier of: i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer would become non-viable; and ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer would have become non-viable, as determined by the MAS.
32. If write-down, full or partial	NA	May be written down fully or partially
33. If write-down, permanent or temporary	NA	Permanent
34. If temporary write-down, description of write-up mechanism	NA	NA
35. Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Additional Tier 1 capital instruments of OCBC Bank	Upon the occurrence of any winding-up proceeding (other than pursuant to a Permitted Reorganisation), Capital Securities are expressly subordinated and subject in right of payment to the prior payment in full of all claims of (i) Senior Creditors and (ii) holders of Tier II Capital Securities, and will rank senior to all Junior Obligations.
36. Non-compliant transitioned features	No	No
37. If yes, specify non-compliant features	NA	NA

4.3 Main Features of Capital Instruments (Continued)

	OCBC Class M 4.0% Non-cumulative Non-convertible Preference Shares	OCC 5.1% Non-cumulative Non-convertible Guaranteed Preference Shares
1. Issuer	Oversea-Chinese Banking Corporation Limited	OCBC Capital Corporation (2008)
2. Unique identifier (ISIN)	SG6V63983492	KYG668911053
3. Governing law(s) of instrument	Singapore	Cayman Islands (In respect of the guaranteed preference shares) Singapore (In respect of the subordinated guarantee and subordinated note)
<i>Regulatory treatment</i>		
4. Transitional Basel III rules	Additional Tier 1	Additional Tier 1
5. Post-transitional Basel III rules	Ineligible	Ineligible
6. Eligible at Solo / Group / Solo and Group	Solo and Group	Solo and Group
7. Instrument type	Preference shares	Guaranteed preference shares
8. Amount recognised in regulatory capital	S\$959 million	S\$1,438 million
9. Par value of instrument	S\$1,000 million	S\$1,500 million
10. Accounting classification	Shareholders' equity	Non-controlling interest in consolidated subsidiary
11. Original date of issuance	17 Jul 2012	27 Aug 2008
12. Perpetual or dated	Perpetual	Perpetual
13. Original maturity date	No maturity	No maturity
14. Issuer call subject to prior supervisory approval	Yes	Yes
15. Optional call date, contingent call dates and redemption amount	First call date: 17 Jan 2018 (at par) Tax call (at par) Regulatory call (at par)	First call date: 20 Sep 2018 (at par) Tax call (at par) Regulatory call (at par)
16. Subsequent call dates, if applicable	17 Jul 2022, and 20 Jun and 20 Dec of each year thereafter	20 Mar, 20 Jun, 20 Sep and 20 Dec of each year after the first call date
<i>Coupons / dividends</i>		
17. Fixed or floating dividend / coupon	Fixed	Fixed to floating
18. Coupon rate and any related index	4.0% p.a.	5.1% p.a. up to 20 Sep 2018, and 3M SGD SOR plus 2.5% p.a. thereafter
19. Existence of a dividend stopper	Yes	Yes
20. Fully discretionary, partially discretionary or mandatory	Fully discretionary	Fully discretionary
21. Existence of step up or other incentive to redeem	No	Yes
22. Noncumulative or cumulative	Noncumulative	Noncumulative
23. Convertible or non-convertible	Nonconvertible	Nonconvertible
24. If convertible, conversion trigger(s)	NA	NA
25. If convertible, fully or partially	NA	NA
26. If convertible, conversion rate	NA	NA
27. If convertible, mandatory or optional conversion	NA	NA
28. If convertible, specify instrument type convertible into	NA	NA
29. If convertible, specify issuer of instrument it converts into	NA	NA
30. Write-down feature	No	No
31. If write-down, write-down trigger(s)	NA	NA
32. If write-down, full or partial	NA	NA
33. If write-down, permanent or temporary	NA	NA
34. If temporary write-down, description of write-up mechanism	NA	NA
35. Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Tier 2 capital instruments of OCBC Bank	Tier 2 capital instruments of OCBC Bank
36. Non-compliant transitioned features	Yes	Yes
37. If yes, specify non-compliant features	Has no loss absorbency at the point of non-viability	Has no loss absorbency at the point of non-viability Has a step-up

4.3 Main Features of Capital Instruments (Continued)

	OCBC Malaysia 6.75% Innovative Tier 1 Capital Securities	OCBC 4.25% Subordinated Notes due 2024
1. Issuer	OCBC Bank (Malaysia) Berhad	Oversea-Chinese Banking Corporation Limited
2. Unique identifier (ISIN)	MYBPZ0900079	US69033DAC11 (Reg S)
3. Governing law(s) of instrument	Malaysia	US69033CAC38 (144A) England (Save for the subordination provisions) Singapore (In respect of the subordination provisions)
<i>Regulatory treatment</i>		
4. Transitional Basel III rules	Additional Tier 1	Tier 2
5. Post-transitional Basel III rules	Ineligible	Tier 2
6. Eligible at Solo / Group / Solo and Group	Group	Solo and Group
7. Instrument type	Capital securities	Subordinated debt
8. Amount recognised in regulatory capital	S\$59 million	S\$1,357 million
9. Par value of instrument	MYR400 million	US\$1,000 million
10. Accounting classification	Liabilities - amortised cost	Liabilities - amortised cost
11. Original date of issuance	17 Apr 2009	19 Jun 2014
12. Perpetual or dated	Perpetual ¹	Dated
13. Original maturity date	No maturity ¹	19 Jun 2024
14. Issuer call subject to prior supervisory approval	Yes	Yes
15. Optional call date, contingent call dates and redemption amount	First call date: 17 Apr 2019 (at par) Tax call (at par) Regulatory call (at par)	Tax call (at par) Regulatory call (at par)
16. Subsequent call dates, if applicable	17 Apr and 17 Oct of each year after the first call date	NA
<i>Coupons / dividends</i>		
17. Fixed or floating dividend / coupon	Fixed to floating	Fixed
18. Coupon rate and any related index	6.75% p.a. up to 17 Apr 2019, and 6M KLIBOR plus 3.32% p.a. thereafter	4.25% p.a.
19. Existence of a dividend stopper	Yes	NA
20. Fully discretionary, partially discretionary or mandatory	Fully discretionary	Mandatory
21. Existence of step up or other incentive to redeem	Yes	No
22. Noncumulative or cumulative	Cumulative ²	NA
23. Convertible or non-convertible	Nonconvertible	Nonconvertible
24. If convertible, conversion trigger(s)	NA	NA
25. If convertible, fully or partially	NA	NA
26. If convertible, conversion rate	NA	NA
27. If convertible, mandatory or optional conversion	NA	NA
28. If convertible, specify instrument type convertible into	NA	NA
29. If convertible, specify issuer of instrument it converts into	NA	NA
30. Write-down feature	No	Yes
31. If write-down, write-down trigger(s)	NA	Contractual approach The earlier of (i) MAS determining that a write-down is necessary; and (ii) a decision by MAS to make a public sector injection of capital, or equivalent support, without which the issuer would become non-viable in both (i) and (ii)
32. If write-down, full or partial	NA	May be written down fully or partially
33. If write-down, permanent or temporary	NA	Permanent
34. If temporary write-down, description of write-up mechanism	NA	NA
35. Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Tier 2 capital instruments of OCBC Malaysia	Unsubordinated and unsecured obligations of OCBC Bank
36. Non-compliant transitioned features	Yes	No
37. If yes, specify non-compliant features	Has no loss absorbency when CET1 CAR falls to 7% or below, and at the point of non-viability Has a step-up	NA

¹ Redemption of the capital securities after 30 years from the issue date, if still outstanding then, is subject to regulatory approval being obtained and may only be made

² Payment of any deferred coupon amount is subject to regulatory approval being obtained and may only be made from the proceeds of a fresh issuance of preference shares. In addition, payment of any deferred coupon amount in excess of the specified limit is subject to regulatory approval.

4.3 Main Features of Capital Instruments (Continued)

	OCBC 4.00% Subordinated Notes due 2024 Callable in 2019	OCBC 3.15% Subordinated Notes due 2023 Callable in 2018
1. Issuer	Oversea-Chinese Banking Corporation Limited	Oversea-Chinese Banking Corporation Limited
2. Unique identifier (ISIN)	US69033DAB38 (Reg S) US69033CAB54 (144A)	US69033DAA54 (Reg S) US69033CAA71 (144A)
3. Governing law(s) of instrument	England (Save for the subordination provisions) Singapore (In respect of the subordination provisions)	England (Save for the subordination provisions) Singapore (In respect of the subordination provisions)
<i>Regulatory treatment</i>		
4. Transitional Basel III rules	Tier 2	Tier 2
5. Post-transitional Basel III rules	Tier 2	Ineligible
6. Eligible at Solo / Group / Solo and Group	Solo and Group	Solo and Group
7. Instrument type	Subordinated debt	Subordinated debt
8. Amount recognised in regulatory capital	S\$1,330 million	S\$1,337 million
9. Par value of instrument	US\$1,000 million	US\$1,000 million
10. Accounting classification	Liabilities - amortised cost	Liabilities - amortised cost
11. Original date of issuance	15 Apr 2014	11 Sep 2012
12. Perpetual or dated	Dated	Dated
13. Original maturity date	15 Oct 2024	11 Mar 2023
14. Issuer call subject to prior supervisory approval	Yes	Yes
15. Optional call date, contingent call dates and redemption amount	First call date: 15 Oct 2019 (at par) Tax call (at par) Regulatory call (at par)	First call date: 11 Mar 2018 (at par) Tax call (at par)
16. Subsequent call dates, if applicable	NA	NA
<i>Coupons / dividends</i>		
17. Fixed or floating dividend / coupon	Fixed to fixed	Fixed to fixed
18. Coupon rate and any related index	4.00% p.a. up to 15 Oct 2019, and reset to 5-yr US Dollar Swap Rate plus 2.203% p.a. thereafter	3.15% p.a. up to 11 Mar 2018, and reset to 5-yr US Dollar Swap Rate plus 2.279% p.a. thereafter
19. Existence of a dividend stopper	NA	NA
20. Fully discretionary, partially discretionary or mandatory	Mandatory	Mandatory
21. Existence of step up or other incentive to redeem	No	No
22. Noncumulative or cumulative	NA	NA
23. Convertible or non-convertible	Nonconvertible	Nonconvertible
24. If convertible, conversion trigger(s)	NA	NA
25. If convertible, fully or partially	NA	NA
26. If convertible, conversion rate	NA	NA
27. If convertible, mandatory or optional conversion	NA	NA
28. If convertible, specify instrument type convertible into	NA	NA
29. If convertible, specify issuer of instrument it converts into	NA	NA
30. Write-down feature	Yes	No
31. If write-down, write-down trigger(s)	Contractual approach The earlier of (i) MAS determining that a write-down is necessary; and (ii) a decision by MAS to make a public sector injection of capital, or equivalent support, without which the issuer would become non-viable in both (i) and (ii)	NA
32. If write-down, full or partial	May be written down fully or partially	NA
33. If write-down, permanent or temporary	Permanent	NA
34. If temporary write-down, description of write-up mechanism	NA	NA
35. Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Unsubordinated and unsecured obligations of OCBC Bank	Unsubordinated and unsecured obligations of OCBC Bank
36. Non-compliant transitioned features	No	Yes
37. If yes, specify non-compliant features	NA	Has no loss absorbency at the point of non-viability

5. LEVERAGE RATIO

5.1 Leverage Ratio

	31-Dec-17	30-Sep-17	30-Jun-17	31-Mar-17
Capital and Total exposures (S\$m)				
Tier 1 capital	28,960	29,694	29,684	29,558
Total exposures	394,770	387,576	380,558	380,068
Leverage Ratio (%)				
Leverage ratio	7.3	7.6	7.8	7.7

Leverage ratio was lower at 7.3% as at 31 December 2017, as compared to 7.6% in previous quarter. Tier 1 capital was lower after taking into account MAS Notice 637 amended definition of insurance subsidiary with effect from 31 December 2017. Total exposures rose mainly driven by growth in customer loans, and increase in placements with banks and central banks partly offset by the decrease in off-balance sheet items.

5.2 Leverage Ratio Summary Comparison Table

	Item	Amount (S\$m)
1	Total consolidated assets as per published financial statements	454,938
2	Adjustment for investments in entities that are consolidated for accounting purposes but are outside the regulatory scope of consolidation	(82,848)
3	Adjustment for fiduciary assets recognised on the balance sheet in accordance with the Accounting Standards but excluded from the calculation of exposure measure	-
4	Adjustment for derivative transactions	3,681
5	Adjustment for SFTs	11
6	Adjustment for off-balance sheet items	25,280
7	Other adjustments	(6,292)
8	Exposure measure	394,770

5.3 Leverage Ratio Common Disclosure Table

	Item	Amount (S\$m)	
		Dec-17	Sep-17
	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)	361,198	354,810
2	Asset amounts deducted in determining Tier 1 capital	(6,292)	(10,220)
3	Total exposures measures of on-balance sheet items (excluding derivative transactions and SFTs)	354,906	344,590
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	3,615	3,565
5	Potential future exposure associated with all derivative transactions	5,691	5,583
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	(21)	(20)
8	CCP leg of trade exposures excluded	-	-
9	Adjusted effective notional amount of written credit derivatives	781	908
10	Further adjustments in effective notional amounts and deductions from potential future exposures of written credit derivatives	-	-
11	Total derivative exposure measures	10,066	10,036
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	4,507	3,487
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	11	15
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	Total SFT exposure measures	4,518	3,502
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	114,099	153,080
18	Adjustments for calculation of exposure measures of off-balance sheet items	(88,819)	(123,632)
19	Total exposure measures of off-balance sheet items	25,280	29,448
	Capital and Total exposures		
20	Tier 1 capital	28,960	29,694
21	Total exposures	394,770	387,576
	Leverage Ratio		
22	Leverage ratio	7.3%	7.6%

SFT: Securities Financing Transactions

CCP: Central Counterparty

6. CREDIT RISK EXPOSURES BY GEOGRAPHY, INDUSTRY AND RESIDUAL MATURITY

6.1 Maximum Exposure to Credit Risk

S\$ million	Period End	Average ^{3/}
Credit risk exposure of on-balance sheet assets:		
Net loans and bills receivable	234,141 ^{1/}	224,653
Placements with and loans to banks	49,377	43,996
Government treasury bills and securities	27,471	26,976
Debt securities	21,407	21,115
Assets pledged	1,056 ^{2/}	1,915
Others	10,580	10,035
	344,032	328,690
Credit risk exposure of off-balance sheet items:		
Credit commitments	128,848	122,375
Contingent liabilities	10,504	10,275
	139,352	132,650
Total maximum credit risk exposure	483,384	461,340

^{1/} Net of specific allowances of \$1,236 million and portfolio allowances of \$1,417 million.

^{2/} Comprise net loans and bills receivable of \$527 million, placements with and loans to banks of \$195 million, government treasury bills and securities of \$6 million and debt securities of \$328 million.

^{3/} Computed on a monthly average basis.

6.2 Geographic/Industry Distribution of Major Types of Credit Exposure

Gross Loans and Bills Receivable ^{1/}

Analysed by Geography

	S\$ million
Singapore	99,872
Malaysia	28,231
Indonesia	19,259
Greater China	59,114
Other Asia Pacific	12,754
Rest of the World	18,091
Total	237,321

Distribution by geography is determined based on where the credit risk resides.

^{1/} Include assets pledged of \$527 million.

Gross Loans and Bills Receivable ⁽¹⁾ (continued)
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	8,073
Manufacturing	12,501
Building and construction	35,436
Housing	64,542
General commerce	29,010
Transport, storage and communication	11,568
Financial institutions, investment and holding companies	37,838
Professionals and individuals	28,704
Others	9,649
Total	237,321

^{1/} Include assets pledged of \$527 million.

Placements with and Loans to Banks ^{2/}
Analysed by Geography

	S\$ million
Singapore	1,390
Malaysia	4,594
Indonesia	819
Greater China	34,472
Other Asia Pacific	3,774
Rest of the World	3,675
Balances with banks	48,724
Bank balances of life assurance fund	848
Total	49,572

Distribution by geography is determined based on where the credit risk resides.

^{2/} Include assets pledged of \$195 million.

Government Treasury Bills and Securities ^{3/}
Analysed by Geography

	S\$ million
Singapore	9,840
Malaysia	2,751
Indonesia	2,806
Greater China	4,049
Other Asia Pacific	5,297
Rest of the World	2,734
Total	27,477

Distribution by geography is determined based on country of the issuer.

^{3/} Include assets pledged of \$6 million.

Debt Securities ^{4/}

Analysed by Geography

	S\$ million
Singapore	2,752
Malaysia	1,838
Indonesia	1,040
Greater China	10,249
Other Asia Pacific	3,911
Rest of the World	1,945
Total	21,735

Distribution by geography is determined based on where the borrowers are incorporated.

Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	808
Manufacturing	1,230
Building and construction	2,155
General commerce	569
Transport, storage and communication	1,390
Financial institutions, investment and holding companies	12,835
Others	2,748
Total	21,735

^{4/} Include assets pledged of \$328 million.

Credit Commitments

Analysed by Geography

	S\$ million
Singapore	97,873
Malaysia	7,176
Indonesia	3,891
Greater China	15,970
Other Asia Pacific	2,105
Rest of the World	1,833
Total	128,848

Distribution by geography is determined based on where the transactions are recorded.

Credit Commitments (continued)
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	1,259
Manufacturing	8,531
Building and construction	14,894
General commerce	17,371
Transport, storage and communication	3,159
Financial institutions, investment and holding companies	33,843
Professionals and individuals	42,855
Others	6,936
Total	128,848

Contingent Liabilities
Analysed by Geography

	S\$ million
Singapore	5,819
Malaysia	1,261
Indonesia	1,155
Greater China	1,842
Other Asia Pacific	301
Rest of the World	126
Total	10,504

Distribution by geography is determined based on where the transactions are recorded.

Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	83
Manufacturing	1,748
Building and construction	1,623
General commerce	3,932
Transport, storage and communication	624
Financial institutions, investment and holding companies	486
Professionals and individuals	302
Others	1,706
Total	10,504

6.3 Residual Contractual Maturity of Major Types of Credit Exposure

On-Balance Sheet Assets

S\$ million	Within 1 week	1 week to 1 month	1 to 3 months	3 to 12 months	1 to 3 years	Over 3 years	Total
Net loans and bills receivable	17,535	28,022	20,589	29,257	36,861	102,404	234,668 ^{1/}
Placements with and loans to banks	7,770	8,208	14,329	16,583	1,216	618	48,724 ^{2/}
Government treasury bills and securities	426	2,244	4,419	9,802	6,035	4,551	27,477 ^{3/}
Debt securities	99	479	988	4,490	6,592	9,087	21,735 ^{4/}

^{1/} Include assets pledged of \$527 million.

^{2/} Include assets pledged of \$195 million and excludes bank balances of life assurance fund.

^{3/} Include assets pledged of \$6 million.

^{4/} Include assets pledged of \$328 million.

Credit Commitments

	S\$ million
Undrawn credit facilities:	
Term to maturity of one year or less	111,902
Term to maturity of more than one year	16,946
Total	128,848

Contingent Liabilities

	S\$ million
Guarantees and standby letters of credit:	
Term to maturity of one year or less	3,935
Term to maturity of more than one year	2,196
	6,131
Acceptances and endorsements	1,283
Documentary credits and other short-term trade related transactions	3,090
Total	10,504

7. CREDIT QUALITY

7.1 Overview of Credit Quality of Assets

The table below provides an overview of the credit quality of the on and off-balance sheet assets of the Group.

A borrower is recognised to be in default when the borrower is unlikely to repay in full its credit obligations to the Group, or the borrower is past due for more than 90 days on its credit obligations to the Group.

S\$ million	Gross carrying amount of ^{1/}				
	(a) Defaulted exposures	(b) Non-defaulted exposures	(c) Impairment allowances	(d) Net Values ^{2/} (a + b - c)	
1	Loans and bills receivable	3,415	233,906	(2,649)	234,672
2	Debt securities	35	21,713	(13)	21,735
3	Off-balance sheet exposures	18	10,486	(4)	10,500
4	Total	3,468	266,105	(2,666)	266,907

^{1/} Refers to the accounting value of the assets before any impairment allowances but after write-offs

^{2/} Refers to total gross carrying amount less impairment allowances

7.2 Changes in Stock of Defaulted Loans and Bills Receivable, and Debt Securities

The table below identifies the changes in defaulted loans and bills receivable as well as debt securities from the previous semi-annual reporting period, including the flows between non-defaulted and defaulted categories and reductions due to write-offs.

The increase in defaulted loans and bills receivable, and debt securities in the second half of 2017 was mainly driven by new defaulted loans and bills receivable that was partly offset by write-offs and upgrades.

S\$ million	(a) Amount outstanding	
1	Defaulted loans and bills receivable, and debt securities as at 30 June 2017	2,897
2	Loans and bills receivable, and debt securities that have defaulted in the second half of 2017	2,013
3	Return to non-defaulted status	(511)
4	Amounts written-off	(602)
5	Other changes ^{1/}	(347)
6	Defaulted loans and bills receivable, and debt securities as at 31 December 2017	3,450
	(1 + 2 - 3 - 4 ± 5)	

^{1/} Other changes comprise foreign exchange, increase in existing defaulted loans and bills receivable, and recoveries

7.3 Overview of Past Due Exposure and Impairment Allowances

The following tables provide a breakdown of defaulted loans and bills receivable (“Non-Performing Loans”) by geography, credit grade under MAS Notice 612 and industry. In addition, under FRS 107, loans and bill receivable that are past due and not impaired need to be separately identified and disclosed. Past due loans refer to loans that are overdue by one day or more, while impaired loans are classified as loans with specific allowances made.

The Group assesses impairment of loans by calculating the present value of future recoverable cash flows and the fair value of the underlying collateral, which is determined via credit assessment on an individual loan basis. For the assessment of available-for-sale financial assets, the Group follows the guidance of FRS 39 in determining when an investment is impaired.

Total Loans and Bills Receivable – Credit Quality

	S\$ million
Neither past due nor impaired	232,020
Not impaired	2,742
Impaired	1,208
Past due loans	3,950
Impaired but not past due	1,351
Gross loans	237,321
Specific allowances	(1,236)
Portfolio allowances	(1,417)
Net loans	234,668

Non-Performing Loans

Analysed by Geography

S\$ million	Singapore	Malaysia	Indonesia	Greater China	Rest of the World	Total
Substandard	760	483	398	74	609	2,324
Doubtful	180	332	29	110	42	693
Loss	146	42	161	48	1	398
Total	1,086	857	588	232	652	3,415

Distribution by geography is determined based on where the credit risk resides.

Non-Performing Loans (continued)
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	305
Manufacturing	304
Building and construction	59
Housing	392
General commerce	291
Transport, storage and communication	1,277
Financial institutions, investment and holding companies	376
Professionals and individuals	146
Others	265
Total	3,415

Analysed by Period Overdue

	S\$ million
Over 180 days	1,212
Over 90 days to 180 days	257
30 days to 90 days	313
Less than 30 days	48
Past due	1,830
No overdue	1,585
Total	3,415

Past Due Loans
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	115
Manufacturing	303
Building and construction	156
General commerce	257
Transport, storage and communication	469
Financial institutions, investment and holding companies	358
Professionals and individuals (include housing)	2,074
Others	218
Total	3,950

Past Due Loans (continued)

Analysed by Geography

	S\$ million
Singapore	1,283
Malaysia	822
Indonesia	742
Greater China	931
Rest of the World	172
Total	3,950

Distribution by geography is determined based on where the credit risk resides.

Impairment Allowances for Loans and Bills Receivable, and Debt Securities

Analysed by Geography

S\$ million	Debt Securities	Specific Allowances		Portfolio Allowances	
		Loans and Bills Receivable	Total		
Singapore	12	308	320		444
Malaysia	-	340	340		278
Indonesia	-	232	232		184
Greater China	-	61	61		367
Other Asia Pacific	-	111	111		83
Rest of the World	1	184	185		61
Total	13	1,236	1,249		1,417

Distribution by geography is determined based on where the credit risk resides.

Analysed by Industry

S\$ million	Specific Allowances		
	Debt Securities	Loans and Bills Receivable	Total
Agriculture, mining and quarrying	-	134	134
Manufacturing	-	63	63
Building and construction	-	12	12
Housing	-	42	42
General commerce	-	139	139
Transport, storage and communication	-	499	499
Financial institutions, investment and holding companies	13	124	137
Professionals and individuals	-	90	90
Others	-	133	133
Total	13	1,236	1,249

Impairment Allowances for Loans and Bills Receivable, and Debt Securities (continued)
Analysed by Industry

S\$ million	Specific Allowances Charged to Income Statement		Total
	Debt Securities	Loans and Bills Receivable	
Agriculture, mining and quarrying	-	175	175
Manufacturing	16	93	109
Building and construction	-	48	48
Housing	-	11	11
General commerce	-	92	92
Transport, storage and communication	-	694	694
Financial institutions, investment and holding companies	16	130	146
Professionals and individuals	-	52	52
Others	-	112	112
Total	32	1,407	1,439

Reconciliation of Changes in Impairment Allowances

S\$ million	Specific Allowances
At 1 January 2017	642
Currency translation	(29)
Bad debts written off	(786)
Recovery of amounts previously provided for Allowances for loans	(65)
	1,504
Net allowances charged to income statements	1,439
Interest recognition on impaired loans	(19)
Transfer from other assets	2
At 31 December 2017	1,249

S\$ million	Portfolio Allowances
At 1 January 2017	2,241
Currency translation	(38)
Allowances credited to income statements	(786)
At 31 December 2017	1,417

Past Due Loans Not Impaired

These are loans and bills receivables that are past due but not impaired as the collateral values of these loans are in excess of the principal and interest outstanding. Allowances for these loans may have been set aside on a portfolio basis.

The following table provides the ageing analysis of non-impaired past due exposures in accordance with FRS 107.

Analysed by Period Overdue

	S\$ million
Past due	
Less than 30 days	1,229
30 to 90 days	985
Over 90 days	528
Past due but not impaired	2,742

7.4 Restructured Exposures

Restructured exposures refer to exposures where the bank has granted concessions or restructured repayment terms to borrowers who are facing difficulties in meeting original repayment schedules. They are classified in the appropriate non-performing grades and not restored to performing loan status until the borrowers have demonstrated sustained ability to meet all future obligations under the restructured terms.

The following table provides the breakdown of impaired and non-impaired restructured exposures.

S\$ million	Impaired Exposures	Non-impaired Exposures
Credit Quality of Restructured Exposures		
Substandard	505	198
Doubtful	206	5
Loss	52	-
Passed/ Watchlist/ Special Mention	-	577
At 31 December 2017	763	780

8. OVERVIEW OF RISK WEIGHTED ASSETS

The table below provides an overview of the Group's total RWA, broken down by the approaches with which the RWA are computed, as stipulated by MAS Notice 637.

S\$ million		RWA		Minimal Capital Requirements ^{1/}
		Dec-17	Sep-17	Dec-17
1	Credit Risk (excluding Counterparty Credit Risk)	147,035	155,613	14,703
2	Of which: Standardised Approach for Credit and Equity exposures	40,892	55,672	4,089
3	Of which: IRB Approach for Credit and Equity exposures ^{2/}	106,143	99,941	10,614
4	Credit Risk: Counterparty Credit Risk	4,674	4,961	467
5	Of which: Current Exposure Method ^{3/}	4,674	4,961	467
6	Of which: Internal Models Method	-	-	-
7	Equity exposures under Simple Risk Weight Method	1,305	5,443	131
8	Equity investments in funds - Look Through Approach	-	-	-
9	Equity investments in funds - Mandate-Based Approach	-	-	-
10	Equity investments in funds - Fall Back Approach	3,212	3,347	321
10a	Equity investments in funds - Partial Use of an Approach	-	-	-
11	Unsettled Transactions	#	2	#
12	Securitisation exposures in banking book	-	-	-
13	Of which: Ratings-Based and Internal Assessment Methods	-	-	-
14	Of which: Supervisory Formula	-	-	-
15	Of which: Standardised Approach	-	-	-
16	Market Risk	16,130	20,475	1,613
17	Of which: Standardised Approach	16,130	20,475	1,613
18	Of which: Internal Models Approach	-	-	-
19	Operational Risk	13,591	13,397	1,359
20	Of which: Basic Indicator Approach	2,663	2,592	266
21	Of which: Standardised Approach	10,928	10,805	1,093
22	Of which: Advanced Measurement Approach	-	-	-
23	Credit RWA pursuant to paragraph 6.1.3(p)(iii) ^{4/}	7,135	8,134	714
24	Floor Adjustment	-	-	-
25	Total	193,082	211,372	19,308

^{1/} Minimum capital requirements are calculated at 10% of RWA

^{2/} Refers to Equity exposures under the Probability of Default ("PD")/Loss Given Default ("LGD") Method

^{3/} CCR RWA includes RWA attributed to Credit Valuation Adjustments ("CVA") and Central Counterparties ("CCP")

^{4/} Refers to Credit RWA attributed to investments in the ordinary shares of unconsolidated major stake companies that are financial institutions, within the prescribed threshold amount in accordance with MAS Notice 637 paragraph 6.1.3 (p)(iii)

represents amounts of less than \$0.5 million

The decrease in RWA between September 2017 and December 2017 was largely attributed to lower Credit and Market Risk RWA:

- Credit RWA decreased primarily due to the migration of Margin Lending portfolio booked in Bank of Singapore from the Standardised Approach to the IRB Approach. In addition, lower Equity Credit RWA and Credit RWA pursuant to paragraph 6.1.3(p)(iii) was because of the adoption of the amended definition of insurance subsidiary in accordance with MAS Notice 637 with effect from December 2017.
- Market Risk RWA decreased due to enhancements in the methodology for calculating RWA for Interest Rate and Foreign Exchange risk

9. CREDIT EXPOSURES UNDER STANDARDISED AND IRB APPROACH

9.1 Credit Exposures under Standardised Approach and CRM effects

The following table illustrates the effects of credit risk mitigation ("CRM") on the calculation of capital requirements for credit and equity exposures under the Standardised approach.

In the second half of 2017, the majority of Sovereign and Margin Lending exposures migrated to IRB approach.

	(a) Exposures before CCF and CRM ^{1/}		(c) Exposures post-CCF and post-CRM ^{2/}		(e)	(f)
	On-Balance Sheet	Off-Balance Sheet	On-Balance Sheet	Off-Balance Sheet	RWA	RWA Density ^{3/}
S\$ million						
Asset Class						
1 Cash Items	866	-	866	-	6	1%
2 Sovereign	3,128	-	3,128	-	436	14%
3 PSE	55	35	504	#	115	23%
4 MDB	36	101	36	6	-	0%
5 Bank	5,584	#	5,612	-	2,540	45%
6 Corporate	12,500	5,579	11,554	1,316	12,103	94%
7 Regulatory Retail	5,856	2,216	5,587	57	4,234	75%
8 Residential Mortgage	14,194	11	13,854	5	5,174	37%
9 Commercial Real Estate	9,930	1,853	9,909	183	10,109	100%
10 Equity exposures	-	-	-	-	-	NA
11 Past Due exposures	122	-	122	-	148	121%
12 Higher risk exposures	-	-	-	-	-	NA
13 Others ^{4/}	6,319	846	5,989	37	6,027	100%
14 Total	58,590	10,641	57,161	1,604	40,892	70%

^{1/} This refers to the regulatory exposure amount (net of impairment allowances and write offs where applicable) before the Credit Conversion Factor ("CCF") for off-balance sheet exposures and the recognised Credit Risk Mitigation ("CRM") are applied

^{2/} This is the net credit equivalent amount, after taking into account the effects of CCFs and CRM

^{3/} Total RWA divided by the exposures post-CCF and post-CRM

^{4/} Includes other exposures not included in the above asset classes, such as fixed assets

Represents amounts of less than \$0.5 million

9.2 Credit Exposures under Standardised Approach by Risk Weight

The following table provides a breakdown of credit risk exposures treated under the Standardised approach by asset class and risk weight. The risk weight assigned corresponds to the level of risk attributed to each exposure.

S\$ million	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Risk Weight									Total EAD ^{1/}
	0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset Class										
1 Cash Items	837	-	29	-	-	-	-	-	-	866
2 Sovereign	2,257	-	-	-	871	-	-	-	-	3,128
3 PSE	21	-	460	-	-	-	23	-	-	504
4 MDB	42	-	-	-	-	-	-	-	-	42
5 Bank	-	-	898	-	4,707	-	7	-	-	5,612
6 Corporate	-	-	101	-	1,379	-	11,383	7	-	12,870
7 Regulatory Retail	-	-	-	-	-	5,643	-	1	-	5,644
8 Residential Mortgage	-	-	-	13,227	-	350	282	-	-	13,859
9 Commercial Real Estate	-	-	-	-	-	-	10,057	35	-	10,092
10 Equity exposures	-	-	-	-	-	-	-	-	-	-
11 Past Due exposures	-	-	-	-	-	-	71	51	-	122
12 Higher risk exposures	-	-	-	-	-	-	-	-	-	-
13 Others ^{2/}	-	-	-	-	-	-	6,026	-	-	6,026
14 Total	3,157	-	1,488	13,227	6,957	5,993	27,849	94	-	58,765

^{1/} Total EAD refers to both on and off-balance sheet amounts that are used for computing capital requirements, net of impairment allowances and write-offs and after application of CRM and CCF

^{2/} Includes other exposures not included in the above asset classes, such as fixed assets

9.3 Credit Exposures under Foundation Internal Ratings-Based Approach (F-IRBA)

The following table provides the main parameters used in the treatment of exposures for the calculation of capital requirements under the F-IRBA.

At the end of 2017, the majority of the Sovereign exposures migrated to F-IRBA from the Standardised Approach.

	(a) On- Balance Sheet ^{1/} (S\$ million)	(b) Off- Balance Sheet ^{2/}	(c) Average CCF (%)	(d) EAD ^{3/} (S\$ million)	(e) Average PD ^{4/} (%)	(f) Number of Obligors ^{5/}	(g) Average LGD ^{4/} (%)	(h) Average Maturity ^{6/} (In years)	(i) RWA (S\$ million)	(j) RWA Density ^{7/} (%)	(k) Expected Losses (S\$ million)	(l) TEP ^{8/} (S\$ million)
Sovereign												
PD Range												
0.00 to < 0.15	36,442	167	100%	36,626	0.00%	23	45%	1.3	575	2%	1	
0.15 to < 0.25	-	-	-	-	-	-	-	-	-	NA	-	
0.25 to < 0.50	112	-	0%	112	0.37%	3	45%	3.4	84	75%	#	
0.50 to < 0.75	-	-	-	-	-	-	-	-	-	NA	-	
0.75 to < 2.50	3	-	0%	3	1.90%	1	45%	1.0	3	100%	#	
2.50 to < 10.00	64	-	0%	64	6.42%	1	45%	1.0	99	155%	2	
10.00 to < 100.00	-	#	-	-	-	1	-	-	-	NA	-	
100.00 (Default)	-	-	-	-	-	-	-	-	-	NA	-	
Sub-total	36,621	167	100%	36,805	0.02%	29	45%	1.4	761	2%	3	7
Bank												
PD Range												
0.00 to < 0.15	42,507	2,014	3%	43,502	0.05%	223	45%	0.8	5,989	14%	10	
0.15 to < 0.25	-	-	-	-	-	-	-	-	-	NA	-	
0.25 to < 0.50	4,248	49	28%	6,059	0.37%	31	45%	0.9	3,493	58%	10	
0.50 to < 0.75	4,402	69	71%	4,534	0.54%	22	45%	0.6	3,131	69%	11	
0.75 to < 2.50	777	14	58%	784	1.13%	27	45%	0.6	749	96%	4	
2.50 to < 10.00	107	6	42%	109	6.15%	24	40%	0.2	159	146%	3	
10.00 to < 100.00	8	69	8%	8	11.10%	37	45%	0.6	17	205%	#	
100.00 (Default)	#	-	0%	#	100.00%	1	45%	1.0	-	0%	#	
Sub-total	52,049	2,221	6%	54,996	0.16%	365	45%	0.8	13,538	25%	38	125
Corporate												
PD Range												
0.00 to < 0.15	32,293	31,213	19%	38,197	0.09%	850	44%	2.2	10,461	27%	16	
0.15 to < 0.25	1	4	0%	1	0.18%	7	41%	3.9	1	49%	#	
0.25 to < 0.50	13,840	13,430	21%	16,561	0.37%	477	44%	1.9	9,388	57%	27	
0.50 to < 0.75	6,955	7,730	21%	8,323	0.54%	519	43%	2.1	5,615	67%	19	
0.75 to < 2.50	10,629	10,618	12%	10,445	1.48%	792	42%	2.0	10,140	97%	65	
2.50 to < 10.00	5,113	3,388	24%	5,043	4.84%	315	43%	2.0	7,224	143%	105	
10.00 to < 100.00	972	2,167	3%	973	14.40%	299	40%	2.9	1,992	205%	55	
100.00 (Default)	1,825	16	45%	1,832	100.00%	150	44%	2.8	-	0%	804	
Sub-total	71,628	68,566	18%	81,375	3.09%	3,409	43%	2.1	44,821	55%	1,090	1,372

9.3 Credit Exposures under Foundation Internal Ratings-Based Approach (F-IRBA) (Continued)

	(a) On- Balance Sheet ^{1/} (S\$ million)	(b) Off- Balance Sheet ^{2/} (S\$ million)	(c) Average CCF (%)	(d) EAD ^{3/} (S\$ million)	(e) Average PD ^{4/} (%)	(f) Number of Obligors ^{5/}	(g) Average LGD ^{4/} (%)	(h) Average Maturity ^{6/} (In years)	(i) RWA (S\$ million)	(j) RWA Density ^{7/} (%)	(k) Expected Losses (S\$ million)	(l) TEP ^{8/} (S\$ million)
Corporate (IPRE)												
PD Range												
0.00 to < 0.15	1,925	115	53%	1,986	0.14%	12	45%	2.6	763	38%	1	
0.15 to < 0.25	-	-	-	-	-	-	-	-	-	NA	-	
0.25 to < 0.50	3,273	511	57%	3,564	0.37%	37	45%	2.1	2,102	59%	6	
0.50 to < 0.75	6,301	1,532	50%	7,072	0.54%	80	45%	2.3	5,211	74%	17	
0.75 to < 2.50	9,999	3,657	67%	12,378	1.40%	240	45%	2.4	13,272	107%	78	
2.50 to < 10.00	1,597	622	34%	1,811	4.17%	131	45%	2.9	2,767	153%	34	
10.00 to < 100.00	228	46	64%	257	11.25%	18	45%	1.5	516	201%	13	
100.00 (Default)	2	-	0%	2	100.00%	1	45%	5.0	-	0%	1	
Sub-total	23,325	6,483	59%	27,070	1.23%	519	45%	2.4	24,631	91%	150	227
Corporate Small Business												
PD Range												
0.00 to < 0.15	344	634	12%	416	0.12%	450	40%	3.0	131	31%	#	
0.15 to < 0.25	479	124	15%	498	0.16%	795	38%	4.3	199	40%	#	
0.25 to < 0.50	945	792	10%	1,025	0.37%	327	40%	3.5	640	62%	2	
0.50 to < 0.75	655	822	12%	756	0.54%	603	40%	2.4	419	55%	2	
0.75 to < 2.50	2,141	1,906	10%	2,260	1.44%	6,659	38%	2.1	1,712	76%	12	
2.50 to < 10.00	1,847	1,017	9%	1,908	4.51%	683	37%	2.5	2,071	109%	32	
10.00 to < 100.00	413	108	10%	423	12.28%	447	32%	2.5	559	132%	17	
100.00 (Default)	1,307	3	1	1,309	100.00%	140	44%	2.3	-	0%	575	
Sub-total	8,131	5,406	11%	8,595	17.32%	10,104	39%	2.6	5,731	67%	640	699
Total (all portfolios)	191,754	82,843	21%	208,841	2.12%	14,426	44%	1.7	89,482	43%	1,921	2,430

- ^{1/} On-balance sheet refers to the amount of the on-balance sheet exposure gross of impairment allowances (before taking into account the effect of CRM)
- ^{2/} Off-balance sheet refers to the exposure value without taking into account valuation adjustments and impairment allowances, CCFs and the effect of CRM
- ^{3/} EAD refers to the amount relevant for the capital requirements calculation, after taking into account the effect of CCFs and CRM
- ^{4/} Refers to the PD and LGD associated with each obligor grade, weighted by EAD
- ^{5/} Number of obligors refers to the number of counterparties
- ^{6/} Refers to the effective maturity of the exposures to the obligor in years, weighted by EAD
- ^{7/} Total RWA divided by the exposures post-CCF and post-CRM
- ^{8/} Refers to the total eligible provisions attributed to the respective portfolios
- # Represents amounts of less than \$0.5 million

9.4 Credit Exposures under Advanced Internal Ratings-Based Approach (A-IRBA)

The following table provides the main parameters used in the treatment of exposures for the calculation of capital requirements under the A-IRBA.

At the end of 2017, the Margin Lending portfolio booked in Bank of Singapore migrated to A-IRBA and is reflected under Other Retail and Corporate asset classes.

	(a) On- Balance Sheet ^{1/} (S\$ million)	(b) Off- Balance Sheet ^{2/}	(c) Average CCF (%)	(d) EAD ^{3/} (S\$ million)	(e) Average PD ^{4/} (%)	(f) Number of Obligors ^{5/}	(g) Average LGD ^{4/} (%)	(h) Average Maturity ^{6/} (In years)	(i) RWA (S\$ million)	(j) RWA Density ^{7/} (%)	(k) Expected Losses (S\$ million)	(l) TEP ^{8/} (S\$ million)
Residential Mortgage												
PD Range												
0.00 to < 0.15	2,370	708	67%	2,844	0.05%	11,195	10%		45	2%	#	
0.15 to < 0.25	12,673	898	75%	13,350	0.15%	36,044	10%		478	4%	3	
0.25 to < 0.50	12,379	855	67%	12,949	0.25%	44,832	10%		682	5%	3	
0.50 to < 0.75	14,065	653	70%	14,523	0.50%	49,361	11%		1,267	9%	8	
0.75 to < 2.50	7,536	515	72%	7,909	1.02%	37,339	11%		1,160	15%	9	
2.50 to < 10.00	4,007	158	76%	4,127	3.62%	12,660	11%		1,248	30%	16	
10.00 to < 100.00	1,207	15	103%	1,223	23.12%	7,476	11%		762	62%	32	
100.00 (Default)	402	9	0%	402	100.00%	2,598	15%		296	74%	53	
Sub-total	54,639	3,811	71%	57,327	1.82%	201,505	11%		5,938	10%	124	109
Qualifying Revolving Retail												
PD Range												
0.00 to < 0.15	662	5,581	45%	3,157	0.06%	543,449	80%		103	3%	1	
0.15 to < 0.25	30	948	54%	538	0.17%	101,474	84%		45	8%	1	
0.25 to < 0.50	247	940	43%	653	0.29%	122,268	80%		79	12%	2	
0.50 to < 0.75	315	753	46%	663	0.59%	93,449	78%		139	21%	3	
0.75 to < 2.50	309	537	59%	625	1.43%	86,030	83%		274	44%	7	
2.50 to < 10.00	297	232	66%	451	5.10%	63,223	84%		482	107%	19	
10.00 to < 100.00	95	55	68%	133	23.47%	18,634	84%		294	222%	26	
100.00 (Default)	30	-	0%	30	100.00%	4,535	82%		#	0%	30	
Sub-total	1,985	9,046	47%	6,250	1.62%	1,033,062	81%		1,416	23%	89	42
Retail Small Business												
PD Range												
0.00 to < 0.15	286	274	57%	443	0.10%	2,724	26%		30	7%	#	
0.15 to < 0.25	1,359	516	47%	1,604	0.17%	6,204	33%		210	13%	2	
0.25 to < 0.50	311	37	59%	332	0.35%	1,087	35%		71	21%	#	
0.50 to < 0.75	598	41	61%	623	0.50%	3,224	37%		176	28%	1	
0.75 to < 2.50	960	77	62%	1,007	1.15%	7,004	42%		481	48%	5	
2.50 to < 10.00	581	28	79%	603	4.45%	6,739	43%		392	65%	11	
10.00 to < 100.00	345	13	78%	355	27.19%	3,401	45%		347	98%	43	
100.00 (Default)	145	1	4%	145	100.00%	1,649	55%		228	157%	64	
Sub-total	4,585	987	53%	5,112	5.62%	32,032	37%		1,935	38%	126	82

9.4 Credit Exposures under Advanced Internal Ratings-Based Approach (A-IRBA) (Continued)

	(a) On- Balance Sheet ^{1/} (S\$ million)	(b) Off- Balance Sheet ^{2/} (S\$ million)	(c) Average CCF (%)	(d) EAD ^{3/} (S\$ million)	(e) Average PD ^{4/} (%)	(f) Number of Obligors ^{5/}	(g) Average LGD ^{4/} (%)	(h) Average Maturity ^{6/} (In years)	(i) RWA (S\$ million)	(j) RWA Density ^{7/} (%)	(k) Expected Losses (S\$ million)	(l) TEP ^{8/} (S\$ million)
Other Retail												
PD Range												
0.00 to < 0.15	357	448	97%	792	0.05%	3,550	9%		10	1%	#	
0.15 to < 0.25	2,849	348	84%	3,140	0.18%	27,277	10%		131	4%	1	
0.25 to < 0.50	271	37	63%	295	0.31%	4,435	15%		26	9%	#	
0.50 to < 0.75	3,302	263	96%	3,554	0.50%	7,154	9%		253	7%	2	
0.75 to < 2.50	6,589	1,168	99%	7,750	1.48%	8,786	9%		853	11%	10	
2.50 to < 10.00	3,785	625	100%	4,409	4.99%	4,127	11%		745	17%	24	
10.00 to < 100.00	6,677	596	100%	7,272	13.18%	5,037	10%		1,507	21%	103	
100.00 (Default)	45	1	2%	45	100.00%	284	28%		75	166%	14	
Sub-total	23,875	3,486	97%	27,257	5.00%	60,650	10%		3,600	13%	154	47
Corporate												
PD Range												
0.00 to < 0.15	126	122	99%	247	0.05%	531	7%		5	2%	#	
0.15 to < 0.25	340	103	100%	443	0.20%	744	7%		22	5%	#	
0.25 to < 0.50	-	-	-	-	-	-	-		-	NA	-	
0.50 to < 0.75	683	134	100%	817	0.50%	641	7%		71	9%	#	
0.75 to < 2.50	1,269	214	100%	1,483	1.34%	711	8%		238	16%	2	
2.50 to < 10.00	1,230	272	100%	1,502	5.00%	464	9%		443	29%	7	
10.00 to < 100.00	2,059	419	100%	2,478	13.65%	991	14%		1,556	63%	48	
100.00 (Default)	-	-	-	-	-	-	-		-	NA	-	
Sub-total	5,707	1,264	100%	6,970	6.29%	4,082	10%	1.0	2,335	33%	57	21
Total (all portfolios)	90,791	18,594	65%	102,916	3.14%	1,331,331	16%		15,224	15%	550	301

- ^{1/} On-balance sheet refers to the amount of the on-balance sheet exposure gross of impairment allowances (before taking into account the effect of CRM)
- ^{2/} Off-balance sheet refers to the exposure value without taking into account valuation adjustments and impairment allowances, CCFs and the effect of CRM
- ^{3/} EAD refers to the amount relevant for the capital requirements calculation, after taking into account the effects of CCFs and CRM
- ^{4/} Refers to the PD and LGD associated with each obligor grade, weighted by EAD
- ^{5/} Number of obligors refers to the number of accounts, except for Retail Small Business which refers to the number of counterparties
- ^{6/} Refers to the effective maturity of the exposures to the obligor in years and is not applicable for portfolios under the IRB treatment of Retail asset classes (A-IRB); For Corporate asset class, average effective maturity is one year across all PD ranges
- ^{7/} Total RWA divided by the exposures post-CCF and post-CRM
- ^{8/} Refers to the total eligible provisions attributed to the respective portfolios
- # Represents amounts of less than \$0.5 million

9.5 Effect on RWA of Credit Derivatives used as CRM

The Group does not recognise credit derivatives as a credit risk mitigant for exposures under F-IRBA or A-IRBA.

10. BACKTESTING OF PD FOR PORTFOLIOS UNDER IRB APPROACH

10.1 Backtesting of PD for Portfolios under Foundation Internal Ratings-Based Approach (F-IRBA)

The following table provides the information used to validate the reliability of PD used in the calculation of capital requirements. It compares the PD under F-IRBA with the five-year average of the annual observed default rate of the Group's obligors.

(a)	(b)	(c)			(d)	(e)	(f)		(g)	(h)	(i)
		External Ratings					Number of Obligors				
		S&P	Fitch	Moody's	PD ^{1/} (%)	Arithmetic PD of Obligors ^{2/} (%)	Dec-16 ^{3/}	Dec-17 ^{3/}	Defaulted Obligors (Dec-17)	Of which: New Defaulted Obligors ^{4/} (Dec-17)	Historical Annual Default Rate ^{5/} (%)
Bank											
PD Range											
	0.00 to < 0.15	AAA to BBB	AAA to BBB	Aaa to Baa2	0.04%	0.06%	223	236	-	-	-
	0.15 to < 0.25	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	NA	NA	-	-	-	-	-
	0.25 to < 0.50	BBB- to BB+	BBB- to BB+	Baa3 to Ba1	0.37%	0.37%	44	31	-	-	-
	0.50 to < 0.75	BB+	BB+	Ba1	0.54%	0.54%	25	22	-	-	-
	0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.15%	1.54%	26	29	-	-	-
	2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	5.12%	4.92%	15	25	-	-	-
	10.00 to < 100.00	B- to C-	B- to C-	B3 to C3	11.10%	11.10%	44	38	-	-	-
Total					0.13%	1.71%	377	381	-	-	-
Corporate											
PD Range											
	0.00 to < 0.15	AAA to BBB	AAA to BBB	Aaa to Baa2	0.09%	0.11%	844	890	-	-	0.00%
	0.15 to < 0.25	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	NA	0.15%	1	7	-	-	-
	0.25 to < 0.50	BBB- to BB+	BBB- to BB+	Baa3 to Ba1	0.37%	0.37%	427	483	-	-	0.04%
	0.50 to < 0.75	BB+	BB+	Ba1	0.54%	0.54%	501	526	-	-	0.08%
	0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.49%	1.50%	903	804	1	-	0.52%
	2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	5.14%	4.55%	402	319	24	5	2.45%
	10.00 to < 100.00	B- to C-	B- to C-	B3 to C3	12.94%	11.50%	279	327	16	1	2.27%
Total					1.08%	2.06%	3,357	3,356	41	6	0.67%
Corporate IPRE											
PD Range											
	0.00 to < 0.15	AAA to BBB	AAA to BBB	Aaa to Baa2	0.14%	0.14%	12	13	-	-	
	0.15 to < 0.25	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	NA	NA	-	-	-	-	
	0.25 to < 0.50	BBB- to BB+	BBB- to BB+	Baa3 to Ba1	0.37%	0.37%	39	37	-	-	
	0.50 to < 0.75	BB+	BB+	Ba1	0.54%	0.54%	80	81	-	-	
	0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.38%	1.44%	235	240	-	-	
	2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.05%	4.30%	137	131	-	-	
	10.00 to < 100.00	B- to C-	B- to C-	B3 to C3	11.50%	12.65%	18	18	1	-	
Total					1.18%	2.33%	521	520	1	-	0.37%

10.1 Backtesting of PD for Portfolios under Foundation Internal Ratings-Based Approach (F-IRBA) (Continued)

(a)	(b)	(c)			(d)	(e)	(f)		(g)	(h)	(i)
		External Ratings					Number of Obligors				
		S&P	Fitch	Moody's	PD ^{1/} (%)	Arithmetic PD of Obligors ^{2/} (%)	Dec-16 ^{3/}	Dec-17 ^{3/}	Defaulted Obligors (Dec-17)	Of which: New Defaulted Obligors ^{4/} (Dec-17)	Historical Annual Default Rate ^{5/} (%)
Corporate Small Business											
PD Range											
	0.00 to < 0.15	AAA to BBB	AAA to BBB	Aaa to Baa2	0.13%	0.12%	427	459	-	-	0.00%
	0.15 to < 0.25	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.16%	0.17%	894	795	-	-	0.08%
	0.25 to < 0.50	BBB- to BB+	BBB- to BB+	Baa3 to Ba1	0.37%	0.36%	313	331	-	-	0.05%
	0.50 to < 0.75	BB+	BB+	Ba1	0.54%	0.52%	601	612	-	-	0.07%
	0.75 to < 2.50	BB+ to B+	BB+ to B+	Ba1 to B1	1.52%	1.57%	6,587	6,664	3	-	0.06%
	2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.47%	4.35%	727	688	14	-	1.27%
	10.00 to < 100.00	B- to C-	B- to C-	B3 to C3	17.15%	13.40%	316	449	17	1	1.91%
Total					3.32%	1.86%	9,865	9,998	34	1	0.20%

^{1/} Refers to PD associated with each obligor grade, weighted by EAD

^{2/} Arithmetic mean of PDs by the number of obligors within the PD range

^{3/} Number of obligors refers to the number of counterparties at the beginning and end of the reporting period

^{4/} New defaulted obligors refers to the number of obligors that defaulted during the last 12-month period that were not funded at the end of the previous annual reporting period

^{5/} Refers to the average of the annual observed default rate (ODR) over the last five years. For Corporate IPRE, ODR is only available at overall asset class level as it adopted PD approach in Q4 2015

10.2 Backtesting of PD for Portfolios under Advanced Internal Ratings-Based Approach (A-IRBA)

The following table provides the information used to validate the reliability of PD used in the calculation of capital requirements. It compares the PD under A-IRBA with the five-year average of the annual observed default rate of the Group's obligors.

The increase in the number of obligors under Other Retail asset class between December 2016 and December 2017 was largely due to the migration of Margin Lending portfolio booked in Bank of Singapore to A-IRBA.

(a)	(b)	(c) External Ratings ^{1/}			(d) PD ^{2/} (%)	(e) Arithmetic PD of Obligors ^{3/} (%)	(f) Number of Obligors		(g) Defaulted Obligors (Dec-17)	(h) Of which: New Defaulted Obligors ^{5/} (Dec-17)	(i) Historical Annual Default Rate ^{6/} (%)
		S&P	Fitch	Moody's			Dec-16 ^{4/}	Dec-17 ^{4/}			
Residential Mortgage											
PD Range											
					0.06%	0.05%	10,837	11,195	13	-	0.08%
					0.15%	0.15%	34,380	36,044	30	3	0.10%
					0.25%	0.25%	44,898	44,832	106	-	0.21%
					0.50%	0.50%	51,586	49,361	194	5	0.35%
					1.04%	1.14%	40,768	37,339	284	18	0.81%
					3.88%	4.56%	9,251	12,660	293	93	2.24%
					22.76%	23.21%	7,786	7,476	1,708	134	20.58%
Total					1.14%	1.57%	199,506	198,907	2,628	253	1.18%
Qualifying Revolving Retail											
PD Range											
					0.06%	0.06%	542,017	543,449	611	-	0.08%
					0.17%	0.16%	88,934	101,474	94	10	0.17%
					0.29%	0.29%	122,827	122,268	389	-	0.29%
					0.59%	0.60%	102,652	93,449	674	6	0.61%
					1.45%	1.45%	97,658	86,030	1,512	68	1.35%
					5.09%	4.95%	77,373	63,223	3,843	172	4.47%
					23.95%	23.94%	23,492	18,634	4,884	38	20.81%
Total					1.36%	1.17%	1,054,953	1,028,527	12,007	294	1.08%
Retail Small Business											
PD Range											
					0.10%	0.10%	3,040	2,724	-	-	-
					0.17%	0.18%	6,602	6,204	11	-	0.33%
					0.35%	0.35%	1,103	1,087	6	-	0.43%
					0.50%	0.50%	3,596	3,224	7	-	0.32%
					1.16%	1.24%	7,190	7,009	66	1	0.99%
					4.33%	4.73%	7,501	6,773	202	5	3.10%
					26.51%	26.62%	3,478	3,401	580	7	20.40%
Total					2.88%	4.33%	32,510	30,422	872	13	2.59%

10.2 Backtesting of PD for Portfolios under Advanced Internal Ratings-Based Approach (A-IRBA) (Continued)

(a)	(b)	(c)			(d)	(e)	(f)		(g)	(h)	(i)
		External Ratings ^{1/}					Number of Obligors				
		S&P	Fitch	Moody's	PD ^{2/} (%)	Arithmetic PD of Obligors ^{3/} (%)	Dec-16 ^{4/}	Dec-17 ^{4/}	Defaulted Obligors (Dec-17)	Of which: New Defaulted Obligors ^{5/} (Dec-17)	Historical Annual Default Rate ^{6/} (%)
Other Retail											
PD Range											
	0.00 to < 0.15				0.05%	0.05%	10,707	4,374	9	-	0.16%
	0.15 to < 0.25				0.16%	0.16%	13,911	28,472	12	1	0.16%
	0.25 to < 0.50				0.33%	0.30%	1,854	4,435	6	-	0.19%
	0.50 to < 0.75				0.50%	0.51%	3,931	8,490	21	1	0.43%
	0.75 to < 2.50				1.22%	1.17%	3,238	11,826	23	-	0.66%
	2.50 to < 10.00				4.62%	4.60%	1,249	8,051	38	-	1.75%
	10.00 to < 100.00				16.94%	18.39%	652	7,401	85	2	13.03%
Total					1.04%	0.76%	35,542	73,049	194	4	0.59%

^{1/} Not applicable for Retail asset classes

^{2/} Refers to PD associated with each obligor grade, weighted by EAD

^{3/} Arithmetic mean of PDs by the number of obligors within the PD range

^{4/} Number of obligors refers to the number of accounts at the beginning and end of the reporting period, except for Retail Small Business which refers to the number of counterparties

^{5/} New defaulted obligors refers to the number of obligors that defaulted during the last 12-month period that were not funded at the end of the previous annual reporting period

^{6/} Refers to the average of the annual observed default rate over the last five years

11. SPECIALISED LENDING AND EQUITY EXPOSURES

11.1 Specialised Lending Exposures under Supervisory Slotting Criteria

Exposures treated under the Supervisory Slotting Criteria include loans to customers for Project Financing (“PF”), Object Financing (“OF”) and Commodity Financing (“CF”), which remained stable during the second half of 2017. Income Producing Real Estate (“IPRE”) exposures are reported under F-IRBA.

Specialised Lending Portfolio (S\$ million)		EAD ^{3/}								
Regulatory Categories	Remaining Maturities	On-Balance Sheet ^{1/}	Off-Balance Sheet ^{2/}	Risk Weight (%)	PF	OF	CF	Total	RWA	Expected Losses
Strong	Less than 2.5 years	-	-	50%	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	70%	-	-	-	-	-	-
Good	Less than 2.5 years	-	-	70%	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	90%	-	-	-	-	-	-
Satisfactory		707	1,524	115%	844	101	233	1,178	1,437	33
Weak		-	-	250%	-	-	-	-	-	-
Default		61	-	-	29	26	11	66	-	33
Total		768	1,524		873	127	244	1,244	1,437	66

^{1/} On-balance sheet refers to the amount of the on-balance sheet exposure net of impairment allowances and write-offs (after taking into account the effect of CRM)

^{2/} Off-balance sheet refers to the exposure value without taking into account the effects of CCFs and CRM

^{3/} EAD refers to the amount relevant for capital requirements calculated by taking into account the effects of CCFs and CRM

11.2. Equity Exposures under Simple Risk Weight Method

The table below represents the parameters used for the determination of capital requirements for the Group’s equity exposures using the Simple Risk Weight method.

Equity Exposures (S\$ million)	On-Balance Sheet	Off-Balance Sheet	Risk Weight (%)	EAD ^{1/}	RWA
Exchange-Traded Equity Exposures	44	-	300%	44	141
Other Equity Exposures	275	-	400%	275	1,164
Total	319	-		319	1,305

^{1/} EAD refers to the amount relevant for capital requirements calculated by taking into account the effects of CCFs and CRM

12. COUNTERPARTY CREDIT RISK

12.1 Counterparty Credit Risk Exposures by Approach

Counterparty credit risk (“CCR”) is the risk of a counterparty defaulting before the final settlement of the transaction, which generally represents uncertain exposures that can vary over time with the movement of underlying market factors such as those in over-the-counter (“OTC”) derivatives.

The Group currently treats CCR under the Current Exposure Method (“CEM”), with regulatory prescribed add-on that represents the potential future exposure in addition to the net replacement cost of the OTC derivatives.

The table below provides an overview of the CCR for OTC derivatives and Securities Financing Transactions (“SFTs”).

Counterparty Credit Risk Exposure by Approach (S\$ million)	(a)	(b)	(c)	(d)	(e)	(f)
	Replacement Cost	Potential Future Exposure	Effective EPE	Alpha factor (α)	EAD ^{1/}	RWA
1 CEM (For derivatives)	4,603	6,514			6,344	2,129
2 CCR Internal models method (For derivatives and SFTs)			-		-	-
3 FC(SA) for SFTs					-	-
4 FC(CA) for SFTs					5,110	312
5 VaR for SFTs					-	-
6 Total						2,441

^{1/} EAD refers to the amount relevant for capital requirements calculation, after taking into account the effects of CRM

12.2 CVA Risk Capital Charge

The Credit Valuation Adjustment (“CVA”) is made to the mark-to-market valuation of OTC derivatives as calculated under the Standardised approach for the Group, which remained stable in the second half of the year.

S\$ million	(a)	(b)
	EAD ^{1/}	RWA
Credit Valuation Adjustments (CVA) Risk Capital Requirements		
Total portfolios subject to 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 Standardised CVA capital requirement	5,917	1,866
4 Total portfolios subject to the CVA risk capital requirement	5,917	1,866

^{1/} EAD refers to the amount relevant for capital requirements calculation, after taking into account the effects of CRM

12.3 Counterparty Credit Risk Exposures under Standardised Approach by Risk Weight

The table below represents the risk weights used in the calculation of capital for the Group's portfolio, which are subjected to the CCR requirements under the Standardised Approach by asset classes.

The decrease in total EAD during the second half of 2017 was due to the migration of Sovereign exposures to F-IRBA.

S\$ million	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Risk Weight								Total EAD ^{1/}
	0%	10%	20%	50%	75%	100%	150%	Others	
Asset Class									
Sovereign	-	-	-	-	-	-	-	-	-
PSE	-	-	#	-	-	-	-	-	#
MDB	-	-	-	-	-	-	-	-	-
Bank	-	-	89	15	-	#	-	-	104
Corporate	-	-	#	-	-	63	-	-	63
Regulatory Retail	-	-	-	-	-	-	-	-	-
Others ^{2/}	-	-	-	-	-	49	-	-	49
Total	-	-	89	15	-	112	-	-	216

^{1/} EAD refers to the amount relevant for capital requirement calculation, after taking into account the effects of CRM

^{2/} Includes other exposures not included in the above asset classes

Represents amounts of less than \$0.5 million

12.4 Counterparty Credit Risk Exposures under Foundation Internal Ratings-Based Approach (F-IRBA)

The table below represents the parameters used in the calculation of capital for the Group's portfolio, which are subjected to the CCR requirements under the F-IRBA by asset classes.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	EAD ^{1/} (S\$ million)	Average PD ^{2/} (%)	Number of Obligors ^{3/}	Average LGD ^{2/} (%)	Average Maturity ^{4/} (In years)	RWA (S\$ million)	RWA Density ^{5/} (%)
Sovereign							
PD Range							
0.00 to < 0.15	1,783	0.00%	7	41%	0.1	1	0%
0.15 to < 0.25	-	-	-	-	-	-	NA
0.25 to < 0.50	-	-	-	-	-	-	NA
0.50 to < 0.75	-	-	-	-	-	-	NA
0.75 to < 2.50	-	-	-	-	-	-	NA
2.50 to < 10.00	-	-	-	-	-	-	NA
10.00 to < 100.00	-	-	-	-	-	-	NA
100.00 (Default)	-	-	-	-	-	-	NA
Sub-total	1,783	0.00%	7	41%	0.1	1	0%
Bank							
PD Range							
0.00 to < 0.15	4,362	0.06%	134	31%	0.8	450	10%
0.15 to < 0.25	-	-	-	-	-	-	NA
0.25 to < 0.50	218	0.37%	6	45%	0.3	112	51%
0.50 to < 0.75	972	0.54%	9	14%	0.2	193	20%
0.75 to < 2.50	68	1.11%	4	15%	0.1	16	23%
2.50 to < 10.00	#	3.20%	1	45%	0.0	#	106%
10.00 to < 100.00	#	11.10%	1	45%	0.0	#	212%
100.00 (Default)	-	-	-	-	-	-	NA
Sub-total	5,620	0.17%	155	28%	0.6	771	14%
Corporate							
PD Range							
0.00 to < 0.15	1,338	0.08%	159	36%	1.8	299	22%
0.15 to < 0.25	-	-	-	-	-	-	NA
0.25 to < 0.50	708	0.37%	74	15%	0.7	149	21%
0.50 to < 0.75	102	0.54%	57	45%	1.0	58	57%
0.75 to < 2.50	162	1.54%	88	45%	3.3	199	123%
2.50 to < 10.00	121	4.35%	28	45%	3.7	202	167%
10.00 to < 100.00	7	17.84%	31	45%	1.1	16	235%
100.00 (Default)	-	-	-	-	-	-	NA
Sub-total	2,438	0.54%	437	31%	1.6	923	38%

12.4 Counterparty Credit Risk Exposures under Foundation Internal Ratings-Based Approach (F-IRBA) (Continued)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	EAD ^{1/} (S\$ million)	Average PD ^{2/} (%)	Number of Obligors ^{3/}	Average LGD ^{2/} (%)	Average Maturity ^{4/} (In years)	RWA (S\$ million)	RWA Density ^{5/} (%)
Corporate (IPRE)							
PD Range							
0.00 to < 0.15	20	0.14%	6	45%	3.2	9	44%
0.15 to < 0.25	-	-	-	-	-	-	NA
0.25 to < 0.50	15	0.37%	11	45%	2.1	9	59%
0.50 to < 0.75	25	0.54%	21	45%	2.1	18	71%
0.75 to < 2.50	23	1.22%	23	45%	2.2	23	101%
2.50 to < 10.00	1	5.07%	4	45%	1.8	2	150%
10.00 to < 100.00	-	-	-	-	-	-	NA
100.00 (Default)	-	-	-	-	-	-	NA
Sub-total	84	0.67%	65	45%	2.4	61	72%
Corporate Small Business							
PD Range							
0.00 to < 0.15	3	0.14%	42	45%	0.9	1	22%
0.15 to < 0.25	#	0.15%	2	45%	0.2	#	15%
0.25 to < 0.50	5	0.37%	29	45%	2.7	3	59%
0.50 to < 0.75	212	0.54%	42	37%	0.0	71	34%
0.75 to < 2.50	4	1.32%	56	45%	1.7	3	82%
2.50 to < 10.00	1	5.45%	20	45%	1.0	2	120%
10.00 to < 100.00	#	11.10%	3	45%	0.2	#	154%
100.00 (Default)	4	100.00%	2	45%	1.0	-	0%
Sub-total	229	2.42%	196	38%	0.1	80	35%
Total (all portfolios)	10,154	0.28%	860	31%	0.8	1,836	18%

^{1/} EAD refers to the amount relevant for capital requirements calculation, after taking into account the effects of CRM

^{2/} Refers to the PD and LGD associated with each obligor grade, weighted by EAD

^{3/} Number of obligors refers to the number of counterparties

^{4/} Refers to the effective maturity of the exposures to the obligor in years, weighted by EAD

^{5/} Total RWA divided by the exposures post-CRM

Represents amounts of less than \$0.5 million

12.5 Counterparty Credit Risk Exposures under Advanced Internal Ratings-Based Approach (A-IRBA)

The table below represents the parameters used in the calculation of capital for the Group's portfolio, which are subjected to the CCR requirements under the A-IRBA by asset classes.

CCR exposures reported under Corporate asset class is largely attributable to the Margin Lending portfolio booked in Bank of Singapore. There was no CCR exposure within the other prescribed asset classes (Sovereign, Banks and Corporate Small Business) under A-IRBA as at 31 December 2017.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	EAD ^{1/} (S\$ million)	Average PD ^{2/} (%)	Number of Obligors ^{3/}	Average LGD ^{2/} (%)	Average Maturity ^{4/} (In years)	RWA (S\$ million)	RWA Density ^{5/} (%)
Corporate							
PD Range							
0.00 to < 0.15	9	0.05%	161	7%		#	2%
0.15 to < 0.25	16	0.20%	224	7%		1	6%
0.25 to < 0.50	-	-	-	-		-	NA
0.50 to < 0.75	20	0.50%	248	7%		2	8%
0.75 to < 2.50	12	1.61%	273	7%		2	16%
2.50 to < 10.00	70	5.00%	613	26%		57	81%
10.00 to < 100.00	119	12.93%	1,264	20%		106	90%
100.00 (Default)	-	-	-	-		-	NA
Sub-total	246	7.79%	2,783	19%	1.1	168	68%
Total (all portfolios)	246	7.79%	2,783	19%	1.1	168	68%

^{1/} EAD refers to the amount relevant for capital requirements calculation, after taking into account the effects of CRM

^{2/} Refers to the PD and LGD associated with each obligor grade, weighted by EAD

^{3/} Number of obligors refers to the number of accounts

^{4/} Refers to the maturity of the exposures to the obligor in years, weighted by EAD; For Corporate asset class, average maturity is 1.1 years at the overall level and is between 0.6 to 2 years across the PD ranges

^{5/} Total RWA divided by the exposures post-CRM

Represents amounts of less than \$0.5 million

12.6 Credit Derivative Exposures

The table below presents the Group's exposure to credit derivatives by what had been bought or sold.

The decrease in notional for credit derivatives during the second half of 2017 was mainly driven by lower single-name credit default swaps and index credit default swaps.

S\$ million		(a)	(b)
		Protection Bought	Protection Sold
Notional			
1	Single-name credit default swaps	3,996	3,226
2	Index credit default swaps	1,170	1,110
3	Other credit derivatives	309	113
4	Total notional	5,475	4,449
Fair values			
5	Positive fair value (asset)	5	62
6	Negative fair value (liability)	62	6

13. SECURITISATION EXPOSURES

There is no securitisation and re-securitisation exposure in the banking and trading books as at 31 December 2017.

14. MARKET RISK

14.1 Market Risk Type under Standardised Approach

During the second half of 2017, the decrease in Market Risk RWA was driven mainly by lower Interest Rate and Foreign Exchange risk as a result of enhancements in methodology for the calculation of Market Risk.

Market Risk by Standardised Approach		(a)
S\$ million		RWA
Notional		
1	Interest rate risk (general and specific)	8,840
2	Equity risk (general and specific)	508
3	Foreign exchange risk	6,249
4	Commodity risk	16
Options		
5	Simplified approach	-
6	Delta-plus method	493
7	Scenario approach	24
8	Securitisation	-
9	Total	16,130

There is no Market Risk exposure under Internal Model Approach as at 31 December 2017.

15. INTEREST RATE RISK IN THE BANKING BOOK

Qualitative disclosures related to Interest Rate Risk in the Banking Book, including a description of its nature and key assumptions made by the Group, can be found in the Risk Management chapter and Notes to the Financial Statements of the 2017 Annual Report.

Based on a 100 bp parallel rise in yield curves on the Group's exposure to major currencies i.e. Singapore Dollar, US Dollar, Hong Kong Dollar and Malaysian Ringgit, net interest income is estimated to increase by \$436 million, or approximately +8.0% of reported net interest income. The corresponding impact from a 100 bp decrease is an estimated reduction of \$446 million in net interest income, or approximately -8.2% of reported net interest income.