Pillar 3, Liquidity Coverage Ratio ("LCR") and Net Stable Funding Ratio ("NSFR") Disclosures

Fourth Quarter 2018

DBS Group Holdings Ltd
Incorporated in the Republic of Singapore
Company Registration Number: 199901152M

DBS GROUP HOLDINGS LTD AND ITS SUBSIDIARIES

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PART A : PILLAR 3 DISCLOSURES (FOR DBS GROUP HOLDINGS LTD AND ITS SUBSIDIARIES)

1 INTRODUCTION

This part contains Pillar 3 disclosures of DBS Group Holdings Ltd and its Subsidiaries (Group) and is made pursuant to the Monetary Authority of Singapore Notice to Banks No. 637 “Notice on Risk Based Capital Adequacy Requirements for Banks incorporated in Singapore" (MAS Notice 637).

The Group views the Basel framework as part of continuing efforts to strengthen its risk management culture and ensure that the Group pursues business growth across segments and markets with the appropriate risk management discipline, practices and processes in place.

For the purpose of calculating its risk-weighted assets, the Group applies the Foundation Internal Ratings-Based Approach to certain wholesale credit exposures, the Advanced Internal Ratings-Based Approach to certain retail credit exposures and the Standardised Approach to all other credit exposures. The Group applies the respective Standardised Approaches for operational and market risks.

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

2 SCOPE OF CONSOLIDATION

The Group's capital requirements are based on the principles of consolidation adopted in the preparation of its financial statements. The Group’s regulatory scope of consolidation is identical to its accounting scope of consolidation. Please refer to the financial statements in the latest available annual report for the principles of consolidation.

3 DISCLOSURE POLICY

Pillar 3 disclosures are prepared in accordance with:

- The principles outlined in the Group Disclosure Policy, which specify that all disclosures must be timely, complete and accurate; as well as
- The governance required and the internal control processes prescribed in the Pillar 3 Disclosure Standard, which have been established to ensure that the Pillar 3 disclosures will meet key stakeholders' expectations.

4 OVERVIEW OF KEY PRUDENTIAL REGULATORY METRICS

The following table provides an overview of key prudential regulatory metrics for the Group (except Liquidity Coverage Ratio and Net Stable Funding Ratio which are for Bank Group as explained in Part B on page B-1 and Part C on page C-1 respectively).

		a	b	c	d	e
$'m		**31 Dec 18**	**30 Sep 18**	**30 Jun 18**	**31 Mar 18**	**31 Dec 17**
Available capital (amounts)						
1	CET1 capital	40,241	39,091	39,615	41,154	41,170
2	Tier 1 capital	43,635	42,508	42,035	44,135	43,425
3	Total capital	48,868	47,762	47,262	46,700	45,598
Risk-weighted assets (amounts)						
4	Total RWA	289,636	294,767	291,819	294,672	287,589
Risk-based capital ratios as a percentage of RWA						
5	CET1 ratio (%)	13.9	13.3	13.6	14.0	14.3
6	Tier 1 ratio (%)	15.1	14.4	14.4	15.0	15.1
7	Total capital ratio (%)	16.9	16.2	16.2	15.8	15.9
Additional CET1 buffer requirements as a percentage of RWA						
8	Capital conservation buffer requirement (2.5% from 2019) (%)	1.875	1.875	1.875	1.875	1.25
9	Countercyclical buffer requirement (%)	0.3	0.3	0.3	0.3	0.2
10	Bank G-SIB and/or D-SIB additional requirements (%)	-	-	-	-	-
11	Total of bank CET1 specific buffer requirements (%) (row 8 + row 9 + row 10)	2.2	2.2	2.2	2.2	1.5
12	CET1 available after meeting the Reporting Bank's minimum capital requirements (%)	6.9	6.2	6.2	5.8	5.9
Leverage Ratio						
13	Total Leverage Ratio exposure measure	610,957	601,427	596,256	584,176	570,983
14	Leverage Ratio (%) (row 2 / row 13)	7.1	7.1	7.0	7.6	7.6
Liquidity Coverage Ratio (1)						
15	Total High Quality Liquid Assets	85,944	80,409	78,849	75,820	73,722
16	Total net cash outflow	62,212	61,036	58,437	61,114	56,656
17	Liquidity Coverage Ratio (%)	138	132	135	125	131
Net Stable Funding Ratio						
18	Total available stable funding	330,573	326,415	323,268	314,438	NA
19	Total required stable funding	304,180	298,980	294,549	286,779	NA
20	Net Stable Funding Ratio (%)	109	109	110	110	NA

NA: Not applicable

(1) Calculated based on average for the quarter.

Commentaries for the quarter explaining significant changes in the above metrics, if any, have been included in subsequent sections of this document.

5 CAPITAL ADEQUACY

5.1 Capital Resources and Capital Adequacy Ratios

$m	31 Dec 2018	30 Sep 2018
Share capital	11,205	11,205
Disclosed reserves and others	34,658	33,354
Total regulatory adjustments to Common Equity Tier 1 capital	(5,622)	(5,468)
Common Equity Tier 1 capital	40,241	39,091
Additional Tier 1 capital instruments[1]	3,394	3,417
Tier 1 capital	43,635	42,508
Total allowances eligible as Tier 2 capital	1,605	1,606
Tier 2 capital instruments[1]	3,628	3,648
Total capital	48,868	47,762
Risk-Weighted Assets (RWA)		
Credit RWA	242,526	243,779
Market RWA	26,170	30,313
Operational RWA	20,940	20,675
Total RWA	289,636	294,767
Capital Adequacy Ratio (CAR) (%)		
Common Equity Tier 1	13.9	13.3
Tier 1	15.1	14.4
Total	16.9	16.2
Minimum CAR including Buffer Requirements (%)[2]		
Common Equity Tier 1	8.7	8.7
Effective Tier 1	10.2	10.2
Effective Total	12.2	12.2
Of which: Buffer Requirements (%)		
Capital Conservation Buffer	1.875	1.875
Countercyclical Buffer	0.3	0.3

Notes:

1 As part of the Basel III transition arrangements, regulatory capital recognition of outstanding Additional Tier 1 and Tier 2 capital instruments that no longer meet the minimum criteria is gradually being phased out. Fixing the base at the nominal amount of such instruments outstanding on 1 January 2013, their recognition was capped at 90% in 2013, with this cap decreasing 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.

2 Includes minimum Common Equity Tier 1, Tier 1 and Total CAR of 6.5%, 8.0% and 10.0% respectively.

Compared to the previous quarter, capital adequacy ratios improved with net profit accretion as well as lower credit and market risk-weighted assets.

5.2 Geographical Distribution of Credit Exposures used in the Countercyclical Capital Buffer

The table below sets out the geographical distribution of the RWA of private sector credit exposures relevant for the calculation of the countercyclical capital buffer.

	31 Dec 18			
	(a)	(b)	(c)	(d)
Geographical breakdown	Jurisdiction-specific countercyclical buffer requirement (%)	RWA for private sector credit exposures used in the computation of the countercyclical buffer ($m)	Bank-specific countercyclical buffer requirement (%)	Countercyclical buffer amount ($m)
Hong Kong	1.875	30,607		
Sweden	1.875	107		
United Kingdom	1.00	6,637		
Others		176,638		
Total		213,989	0.3	869

The Basel III countercyclical capital buffer 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. The Group attributes private sector credit exposures to jurisdictions based primarily on the jurisdiction of risk of each obligor or, if applicable, its guarantor. 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.

5.3 Capital Adequacy of Significant Banking Subsidiaries

The capital adequacy ratios of each banking subsidiary are calculated in accordance with the regulatory requirements applicable in the respective jurisdictions, using the approaches available under those requirements. DBS Bank (Hong Kong) Limited and DBS Bank (China) Limited are deemed to be significant banking subsidiaries for the purposes of Pillar 3 disclosures under MAS Notice 637 paragraph 11.3.19.

	31 Dec 18			
	Total risk-weighted assets ($m)	CAR (%)		
		Common Equity Tier 1	Tier 1	Total
DBS Bank (Hong Kong) Limited	40,757	15.1	15.7	17.7
DBS Bank (China) Limited	17,665	12.5	12.5	15.5

6 COMPOSITION OF CAPITAL

6.1 Financial Statements and Regulatory Scope of Consolidation

$m	31 Dec 2018 Amount	Cross Reference to Section 6.2
ASSETS		
Cash and balances with central banks	22,185	
Government securities and treasury bills	47,278	
Due from banks	40,178	
Derivatives	17,029	
Bank and corporate securities	58,197	
of which: PE/VC investments held beyond the relevant holding periods	1	a
Loan and advances to customers	345,003	
of which: Total allowances admitted as eligible T2 Capital	(1,605)	b
Other assets	13,418	
of which: Deferred tax assets	356	c
Re-grossing of deferred tax assets and deferred tax liabilities as required under MAS Notice 637	119	d
Associates	838	
of which: Goodwill on acquisition[1]	15	e
Properties and other fixed assets	1,450	
Goodwill and intangibles	5,175	
of which: Goodwill	5,175	f
of which: Intangibles	-	g
TOTAL ASSETS	**550,751**	
LIABILITIES		
Due to banks	22,648	
Deposits and balances from customers	393,785	
Derivatives	16,692	
Other liabilities	18,440	
Re-grossing of deferred tax assets and deferred tax liabilities as required under MAS Notice 637	119	
Other debt securities	45,712	
Subordinated term debts	3,599	h
TOTAL LIABILITIES	**500,876**	
NET ASSETS	**49,875**	

6.1 Financial Statements and Regulatory Scope of Consolidation (continued)

	31 Dec 2018	
$m	**Amount**	**Cross Reference to Section 6.2**
EQUITY		
Share capital	10,898	
of which: Amount eligible as CET1 Capital	11,205	i
of which: Treasury shares	(307)	j
Other equity instruments	2,812	k
Other reserves	3,701	l
of which: Cash flow hedge reserve	(46)	m
Revenue reserves	31,634	n
of which: Regulatory loss allowance reserves	376	o
of which: Unrealised fair value gains/losses on financial liabilities and derivative liabilities arising from changes in own credit risk	(2)	p
SHAREHOLDERS' FUNDS	49,045	
Non-controlling interests	830	
of which: Eligible for recognition as CET1 Capital under transitional arrangements	6	q
of which: Eligible for recognition as AT1 Capital under transitional arrangements	582	r
of which: Eligible for recognition as T2 Capital under transitional arrangements	29	s
TOTAL EQUITY	**49,875**	

(1) Not adjusted for subsequent share of losses or impairment losses (Refer to page A-5).

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

There were no significant movements in the expanded balance sheet items in the second half of 2018.

6.2 Capital Adequacy and Reconciliation of Regulatory Capital to the Balance Sheet

The following disclosure is made according to the template prescribed in MAS Notice 637 Annex 11B.

The alphabetic cross-references in the column "Cross Reference to Section 6.1" relate to those used in the balance sheet reconciliation in Section 6.1.

Row 64 "Bank-specific buffer requirement" and row 68 "Common Equity Tier 1 available after meeting the Reporting Bank's minimum capital requirements" are not directly comparable. Row 64 is the sum of row 69 and rows 65 to 67. Row 68 is the CET1 CAR, less the minimum CET1 CAR requirement (Row 69) and any CET1 CAR used to meet the Tier 1 and Total capital requirements, expressed as a percentage of risk-weighted assets.

$m		31 Dec 2018 Amount	31 Dec 2018 Cross Reference to Section 6.1
Common Equity Tier 1 capital: instruments and reserves			
1	Paid-up ordinary shares and share premium (if applicable)	11,205	i
2	Retained earnings	31,258	n-o
3#	Accumulated other comprehensive income and other disclosed reserves	3,394	j+l
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	q
6	**Common Equity Tier 1 capital before regulatory adjustments**	**45,863**	
Common Equity Tier 1 capital: regulatory adjustments			
7	Valuation adjustment pursuant to Part VIII of MAS Notice 637	4	
8	Goodwill, net of associated deferred tax liability	5,190	e+f
9#	Intangible assets, net of associated deferred tax liability	-	g
10#	Deferred tax assets that rely on future profitability	475	c+d
11	Cash flow hedge reserve	(46)	m
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	(2)	p
15	Defined benefit pension fund assets, net of associated deferred tax liability	-	
16	Investments in own shares	-	
17	Reciprocal cross-holdings in ordinary shares of financial institutions	-	
18	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
19	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries) (amount above 10% threshold)	-	
20#	Mortgage servicing rights (amount above 10% threshold)	-	
21#	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of associated deferred tax liability)	-	
22	Amount exceeding the 15% threshold	-	
23	of which: investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
24#	of which: mortgage servicing rights	-	
25#	of which: deferred tax assets arising from temporary differences	-	
26	National specific regulatory adjustments	1	

$m		31 Dec 2018 Amount	Cross Reference to Section 6.1
26A	PE/VC investments held beyond the relevant holding periods set out in MAS Notice 630	1	a
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**	**5,622**	
29	**Common Equity Tier 1 capital (CET1)**	**40,241**	
Additional Tier 1 capital: instruments			
30	AT1 capital instruments and share premium (if applicable)	2,812	k
31	of which: classified as equity under the Accounting Standards	2,812	
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	582	r
35	of which: instruments issued by subsidiaries subject to phase out	582	
36	**Additional Tier 1 capital before regulatory adjustments**	**3,394**	
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)**	**3,394**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**43,635**	
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	3,599	h
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	29	s
49	of which: instruments issued by subsidiaries subject to phase out	29	
50	Provisions	1,605	b
51	**Tier 2 capital before regulatory adjustments**	**5,233**	

$m		31 Dec 2018 Amount	Cross Reference to Section 6.1
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 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 which the Authority may specify	-	
57	**Total regulatory adjustments to Tier 2 capital**	**-**	
58	**Tier 2 capital (T2)**	**5,233**	
59	**Total capital (TC = T1 + T2)**	**48,868**	
60	**Floor–adjusted total risk weighted assets**	**289,636**	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	**Common Equity Tier 1 CAR**	**13.9%**	
62	**Tier 1 CAR**	**15.1%**	
63	**Total CAR**	**16.9%**	
64	Bank-specific buffer requirement	8.7%	
65	of which: capital conservation buffer requirement	1.875%	
66	of which: bank specific countercyclical buffer requirement	0.3%	
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	6.9%	
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	2,805	
73	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	296	
74	Mortgage servicing rights (net of associated deferred tax liability)	-	
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)	504	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	504	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	1,335	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	1,101	

$m		31 Dec 2018 Amount	Cross Reference to Section 6.1
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	1,665	
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	2,202	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

For regulatory adjustments, deductions from capital are reported as positive numbers and additions to capital are reported as negative numbers.

Items marked with a hash [#] are elements where a more conservative definition has been applied in MAS Notice 637 relative to those set out under the Basel III capital standards.

Deferred tax assets relating to temporary differences in excess of specified thresholds c.f. row 21 and 25 are to be deducted under the Basel Committee capital rules (paragraph 69). Under MAS Notice 637, they are deducted in total. If the Basel Committee capital rules were to be applied, eligible capital would have been $0.4 billion and risk-weighted assets $1.0 billion higher.

Movements in the AT1 capital instruments in the second half of 2018 was mainly due to the issuance of S$1 billion 3.98% Non-Cumulative Non-Convertible Perpetual Capital Securities.

6.3 Main Features of Capital Instruments

The following disclosures are made solely 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 transaction documents available at http://www.dbs.com/investor/capital-disclosures.html. This includes the issuances made over the previous period.

Since 30 June 2018, the Group has issued the following new capital instrument(s):
1. S$1,000,000,000 3.98% Non-Cumulative Non-Convertible Perpetual Capital Securities

31 Dec 2018		**DBS Group Holdings Ltd Ordinary Shares**	**S$805,000,000 4.70% Non-Cumulative Non-Convertible Perpetual Capital Securities First Callable in 2019**
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GROUP HOLDINGS LTD ISIN Code: SG1L01001701	SGX Name: DBSGrp4.7%PerCapSec S ISIN Code: SG59H0999851
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel lll rules	Common Equity Tier 1	Additional Tier 1
5	Post-transitional Basel lll rules	Common Equity Tier 1	Additional Tier 1
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Non-Cumulative Non-Convertible Perpetual Capital Securities
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$11,205 million	S$803 million
9	Par value of instrument	NA	S$805 million
10	Accounting classification	Shareholders' equity	Shareholders' equity
11	Original date of issuance	9 Mar 1999	3 Dec 2013
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	NA	03 Jun 2019
	Contingent call dates	NA	Change of Qualification Event, or Tax Event
	Redemption amount	NA	Principal amount together with, subject to certain conditions, accrued but unpaid Distributions
16	Subsequent call dates, if applicable	NA	Optional – Any date after 3 Jun 2019
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Discretionary dividend amount	Fixed to floating
18	Coupon rate and any related index	NA	4.70% p.a. up to 3 Jun 2019. 5Y SGD SOR plus 3.061% p.a. thereafter, reset every 5 years
19	Existence of a dividend stopper	NA	Yes
20	Fully discretionary, partially discretionally or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or incentive to redeem	No	No
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	Yes
31	If write-down, write-down trigger(s)	NA	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	NA	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)	Immediately subordinated to Additional Tier 1 capital instruments	Immediately subordinated to Tier 2 capital instruments
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		US$750,000,000 3.60% Non-Cumulative Non-Convertible Perpetual Capital Securities First Callable in 2021	S$1,000,000,000 3.98% Non-Cumulative Non-Convertible Perpetual Capital Securities First Callable in 2025
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBSGrp 3.6%PerCapSec S ISIN Code: XS1484844656	SGX Name: DBSGrp 3.98%PerCapSec S ISIN Code: SGXF11720293
3	Governing law(s) of the instrument	England: Trust Deed Singapore: Subordination	Singapore
4	Transitional Basel III rules	Additional Tier 1	Additional Tier 1
5	Post-transitional Basel III rules	Additional Tier 1	Additional Tier 1
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Non-Cumulative Non-Convertible Perpetual Capital Securities	Non-Cumulative Non-Convertible Perpetual Capital Securities
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$1,009 million	S$1,000 million
9	Par value of instrument	US$750 million	S$1,000 million
10	Accounting classification	Shareholders' equity	Shareholders' equity
11	Original date of issuance	7 Sep 2016	12 Sep 2018
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	07 Sep 2021	12 Sep 2025
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with, subject to certain conditions, accrued but unpaid Distributions	Principal amount together with, subject to certain conditions, accrued but unpaid Distributions
16	Subsequent call dates, if applicable	Optional - Any Distribution Payment Date after 7 Sep 2021	Optional - Any Distribution Payment Date after 12 Sep 2025
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed to floating
18	Coupon rate and any related index	3.60% p.a. up to 7 Sep 2021. 5Y USD Swap Rate plus 2.39% p.a. thereafter, reset every 5 years	3.98% p.a. up to 12 Sep 2025. 7Y SGD Swap Rate plus 1.65% p.a. thereafter, reset every 7 years
19	Existence of a dividend stopper	Yes	Yes
20	Fully discretionary, partially discretionally or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or incentive to redeem	No	No
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	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	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)	Immediately subordinated to Tier 2 capital instruments	Immediately subordinated to Tier 2 capital instruments
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		S$800,000,000 4.70% Non-Cumulative, Non-Convertible, Non-Voting Preference Shares Callable in 2020	S$250,000,000 3.80% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Bank Ltd.	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS S$800M 4.7% NCPS ISIN Code: SG2C54964409	SGX Name: DBS GRP S$250M3.8% N280120 ISIN Code: SG71A5000002
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel III rules	Additional Tier 1	Tier 2
5	Post-transitional Basel III rules	Ineligible	Tier 2
6	Eligible at Solo/Group/Group & Solo	Solo and Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Preference Shares	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$582 million	S$258 million
9	Par value of instrument	S$800 million	S$250 million
10	Accounting classification	Non-controlling interest in consolidated subsidiary	Liability - amortised cost
11	Original date of issuance	22 Nov 2010	20 Jan 2016
12	Perpetual or dated	Perpetual	Dated
13	Original maturity date	No maturity	20 Jan 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	22 Nov 2020	20 Jan 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Liquidation Preference together with, subject to certain limitations and qualifications, accrued but unpaid Dividends	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any date after 22 Nov 2020	Optional – Any Interest Payment Date after 20 Jan 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	4.70% p.a.	3.80% p.a. up to 20 Jan 2023. 5Y SGD SOR plus 1.10% p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	Yes	No
20	Fully discretionary, partially discretionally or mandatory	Fully discretionary	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Noncumulative	Cumulative
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 write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	NA	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)	Immediately subordinated to Tier 2 capital instruments	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	Yes	No
37	If yes, specify non-compliant features	Has no loss-absorbency at point of non-viability	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		**JPY10,000,000,000 0.918% Subordinated Notes due 2026 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme**	**HK$1,500,000,000 3.24% Subordinated Notes due 2026 Callable in 2021 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme**
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	ISIN Code: XS1376555865	SGX Name: DBS GRP HKD1.5B3.24% N260419 ISIN Code: XS1397782860
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel lll rules	Tier 2	Tier 2
5	Post-transitional Basel lll rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$124 million	S$256 million
9	Par value of instrument	JPY10,000 million	HK$1,500 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	8 Mar 2016	19 Apr 2016
12	Perpetual or dated	Dated	Dated
13	Original maturity date	8 Mar 2026	19 Apr 2026
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	NA	19 Apr 2021
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	NA	Optional – Any Interest Payment Date after 19 Apr 2021
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	0.918% p.a.	3.24% p.a. up to 19 Apr 2021. 5Y HKD Swap Rate plus 1.90% p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
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	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	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)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		A$750,000,000 Floating Rate Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme	EUR600,000,000 1.5% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP A$750M F280316 ISIN Code: AU3FN0041406	SGX Name: DBS GRP EUR600M1.5%N280411 ISIN Code: XS1802465846
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel III rules	Tier 2	Tier 2
5	Post-transitional Basel III rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$723 million	S$934 million
9	Par value of instrument	A$750 million	EUR600 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	16 Mar 2018	11 Apr 2018
12	Perpetual or dated	Dated	Dated
13	Original maturity date	16 Mar 2028	11 Apr 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	16 Mar 2023	11 Apr 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 16 Mar 2023	Optional – Any Interest Payment Date after 11 Apr 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Floating	Fixed
18	Coupon rate and any related index	3 month BBSW + 158 bps up to maturity	1.50% p.a. up to 11 Apr 2023. 5Y EUR Mid-Swap Rate + 120 bp p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
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	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	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)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		RMB950,000,000 5.25% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme	USD750,000,000 4.52% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP RMB950M5.25%N280515 ISIN Code: XS1821439368	SGX Name: DBS GRP US$750M4.52%N281211A/ N281211R ISIN Code: US24023MAA27/ US24023NAA00
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel lll rules	Tier 2	Tier 2
5	Post-transitional Basel lll rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$188 million	S$1,025 million
9	Par value of instrument	RMB950 million	USD750 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	15 May 2018	11 Jun 2018
12	Perpetual or dated	Dated	Dated
13	Original maturity date	15 May 2028	11 Dec 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	15 May 2023	11 Dec 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 15 May 2023	Optional – Any Interest Payment Date after 11 Dec 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	5.25% p.a.	4.52% p.a. up to 11 Dec 2023. 5-year USD Mid-Swap Rate plus 159 bp p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
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	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	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)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2018		JPY7,300,000,000 0.85% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	ISIN Code: XS1844087087
3	Governing law(s) of the instrument	Singapore
4	Transitional Basel III rules	Tier 2
5	Post-transitional Basel III rules	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$91 million
9	Par value of instrument	JPY7,300 million
10	Accounting classification	Liability - amortised cost
11	Original date of issuance	25 Jun 2018
12	Perpetual or dated	Dated
13	Original maturity date	25 Jun 2028
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date	25 Jun 2023
	Contingent call dates	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 25 June 2023
	Coupons/dividends	
17	Fixed or floating dividend/coupon	Fixed
18	Coupon rate and any related index	0.85% p.a. up to 25 June 2023. 6-month JPY Libor + 74.375bp p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory
21	Existence of step up or incentive to redeem	No
22	Noncumulative or cumulative	Cumulative
23	Convertible or non-convertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA
25	If convertible, fully or partially	NA
26	If convertible, conversion rate	NA
27	If convertible, mandatory or optional conversion	NA
28	If convertible, specify instrument type convertible into	NA
29	If convertible, specify issuer of instrument it converts into	NA
30	Write-down feature	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. 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 or the DBS Group 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 or the DBS Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially
33	If write-down, permanent or temporary	Permanent
34	If temporary write-down, description of write-up mechanism	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	NA

7 LINKAGES BETWEEN FINANCIAL STATEMENTS AND REGULATORY EXPOSURES

7.1 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.

	31 Dec 18					
	a	b	c	d	e	f
		Carrying amounts of items -				
$'m	Carrying amounts as reported in balance sheet of published financial statements	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 balances with central banks	22,185	21,804	381	-	381	-
Government securities & treasury bills	47,278	36,695	-	-	10,583	-
Due from banks	40,178	22,118	8,850	-	10,721	-
Derivatives	17,029	-	16,730	-	17,011	-
Bank & corporate securities	58,197	41,797	-	2,309	14,090	1
Loans & advances to customers	345,003	337,761	7,157	42	1,166	-
Other assets	13,418	10,808	2,237	-	-	373
Associates	838	823	-	-	-	15
Properties and other fixed assets	1,450	1,450	-	-	-	-
Goodwill & intangibles	5,175	-	-	-	-	5,175
Total assets	**550,751**	**473,256**	**35,355**	**2,351**	**53,952**	**5,564**
Liabilities						
Due to banks	22,648	-	7,333	-	1,998	14,477
Deposits and balances from customers	393,785	-	-	-	723	393,062
Derivatives	16,692	-	16,684	-	16,690	-
Other liabilities	18,440	407	-	-	1,532	16,501
Other debt securities	45,712	-	-	-	6,518	39,194
Subordinated term debts	3,599	-	-	-	-	3,599
Total liabilities	**500,876**	**407**	**24,017**	**-**	**27,461**	**466,833**

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

The sum of amounts disclosed under columns (b) to (f) above can be more than amounts disclosed in column (a) as some of the assets and liabilities, such as derivatives, amounts due to/from banks etc. can be subject to regulatory capital charges for credit risk, counterparty credit risk and market risk.

7.2 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.

	31 Dec 18			
	a	b	c	d
		Items subject to -		
$'m	**Total**	**Credit risk requirements**	**CCR requirements**	**Securitisation framework**
Assets carrying amount under regulatory scope of consolidation	545,187	473,256	35,355	2,351
Liabilities carrying amount under regulatory scope of consolidation	34,043	407	24,017	-
Total net amount under regulatory scope of consolidation	**511,144**	**472,849**	**11,338**	**2,351**
Off-balance sheet amounts	297,096	55,569	-	210
Differences due to netting and potential future exposures for derivatives	-	-	24,997	-
Differences due to allowances[(1)]	-	5,020	-	-
Other differences	-	(4,669)	11,833	(40)
Exposure amounts considered for regulatory purposes	**579,458**	**528,769**	**48,168**	**2,521**

Items subject to market risk requirements have not been included in the table above as these are computed based on notional positions in the relevant underlying instruments.

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

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

The key differences between accounting amounts and regulatory exposure amounts are:
(i) Off-balance sheet amounts: Off-balance sheet amounts include contingent liabilities and undrawn portions of committed facilities after application of credit conversion factors;
(ii) Differences due to netting and potential future exposures for derivatives: Derivative regulatory exposures are netted (where an enforceable master netting agreement is in place) and also include potential future exposures;
(iii) Differences due to allowances[(1)]: The carrying values of assets in the financial statements are net of allowances. However, regulatory exposures under IRBA are gross of all allowances, while those under SA are net of speciflc allowances; and
(iv) Other differences: These mainly include differences arising from the recognition of credit risk mitigation, the inclusion of repurchase agreement for counterparty credit risk etc.

Valuation Process

The valuation processes within the Group are governed by the Valuation Policy and supporting standards, which are approved by the Board Risk Management Committee and the Group Market and Liquidity Risk Committee respectively. The policy and standards apply to financial assets and liabilities where mark-to-market or model valuation is required.

The Valuation Policy and supporting standards govern the revaluation of all financial assets and liabilities that are measured at fair value, covering both market prices as well as model inputs. Financial assets and liabilities are marked directly using reliable and independent market prices or by using reliable and independent market parameters (as model inputs) in conjunction with a valuation model. Valuations are determined using generally accepted models (for example, discounted cash flows, Black-Scholes model, interpolation techniques) based on quoted market prices for similar instruments or underlyings or market parameters. These valuation models go through an assurance process carried out by the Risk Management Group (RMG), independent of the model developers. Where necessary, the Group also imposes model reserves and other adjustments in determining fair value. Models are approved by the Group Market and Liquidity Risk Committee.

[(1)] Allowances refers to specific allowances (Expected Credit Loss Stage 3) and general allowances (Expected Credit Loss Stage 1 and 2)

7.3 Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts (continued)

A process of independent price verification (IPV) is in place to establish the accuracy of the market parameters used when the marking is performed by the Front Office. The IPV process entails independent checks to compare traders' marks to independent sources such as broker/dealer sources or market consensus providers. The results of the IPV are reviewed by independent control functions on a monthly basis. For illiquid financial instruments where mark-to-market is not possible, the Group will value these products using an approved valuation model. Prices and parameters used as inputs to the model or to any intermediate technique involving a transformation process must be derived using approved market sources. Where possible, the inputs must be checked against multiple sources for reliability and accuracy. Reliance will be placed on the model assurance process established by RMG for assurance of valuation models as fit for purpose.

Where significant unobservable inputs are used in these models, valuation adjustments or reserves are taken to provide for any uncertainty in valuations. Valuation adjustments or reserve methodologies are also used to substantiate the significance of unobservable inputs. Such methodologies are governed by the Valuation Policy and supporting standards, and the Group Market and Liquidity Risk Committee is responsible for the oversight of valuation adjustments including prudent valuation adjustments (PVA), and meeting compliance with MAS Notice 637 Annex 8N.

MAS Notice 637 Annex 8N sets out the standards for valuing financial instruments that are accounted for at fair value, regardless of whether these are booked in the trading or banking book, for the purpose of determining capital requirements. Banks are required to apply prudence and make appropriate adjustments, taking into account valuation uncertainties. Valuation adjustments taken in addition to that which has been incorporated into the financial statements are known as prudent valuation adjustments (PVA). PVA is deducted from CET1 capital.

The Group maintains policies, systems and controls for the calculation of valuation adjustments, including PVA. The Group's PVA methodology addresses fair value uncertainties arising from the following factors (where relevant): concentrated positions, unearned credit spreads, close out costs, operational risks, early termination costs, investing and funding costs, future administrative costs and model risk.

7.4 Prudent Valuation Adjustments

The following table provides a breakdown of the elements of PVA.

	31 Dec 18							
	a	b	c	d	e	f	g	h
$'m	**Equity**	**Interest rates**	**FX**	**Credit**	**Commodities**	**Total**	**of which in the trading book**	**of which in the banking book**
Closeout uncertainty	-	#	1	3	-	4	2	2
of which: midmarket value	-	-	-	-	-	-	-	-
of which: closeout cost	-	-	-	-	-	-	-	-
of which: concentration	-	#	1	3	-	4	2	2
Early termination	-	-	-	-	-	-	-	-
Model risk	-	-	-	-	-	-	-	-
Operational risk	-	-	-	-	-	-	-	-
Investing and funding costs	-	-	-	-	-	-	-	-
Unearned credit spreads	-	-	-	-	-	-	-	-
Future administrative costs	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total adjustment	-	#	1	3	-	4	2	2

Numbers below 0.5.

8 LEVERAGE RATIO

The following tables provide the breakdown of the Group's leverage ratio regulatory elements and a reconciliation of the Group's balance sheet assets with the leverage ratio exposure measure.

Leverage Ratio Common Disclosure Template

	Item	Amount[1] ($m) 31 Dec 2018	30 Sep 2018
	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)	514,796	512,169
2	Asset amounts deducted in determining Tier 1 capital	(5,626)	(5,544)
3	**Total exposure measures of on-balance sheet items** (excluding derivative transactions and SFTs)	**509,170**	**506,625**
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	8,648	9,529
5	Potential future exposure associated with all derivative transactions	16,000	16,141
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	3,596	2,748
10	Further adjustments in effective notional amounts and deductions from potential future exposures of written credit derivatives	-	-
11	**Total derivative exposure measures**	**28,244**	**28,418**
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	18,962	10,631
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	139	133
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	**Total SFT exposure measures**	**19,101**	**10,764**
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	297,096	294,190
18	Adjustments for calculation of exposure measures of off-balance sheet items	(242,654)	(238,570)
19	**Total exposure measures of off-balance sheet items**	**54,442**	**55,620**
	Capital and Total exposures		
20	Tier 1 capital	43,635	42,508
21	Total exposures	610,957	601,427
	Leverage Ratio		
22	**Leverage Ratio**	**7.1%**	**7.1%**

[1] Leverage ratio is computed using quarter-end balances.

The Group's leverage ratio as at 31 December 2018 remained at 7.1% as increase in Tier 1 Capital was offset by increase in total exposures. The ratio is well above the 3% minimum requirement.

Leverage Ratio Summary Comparison Table

	Item	31 Dec 2018 Amount[1] ($m)
1	Total consolidated assets as per published financial statements	550,751
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	11,215
5	Adjustment for SFTs	139
6	Adjustment for off-balance sheet items	54,442
7	Other adjustments	(5,590)
8	**Exposure measure**	**610,957**

[1] Leverage ratio is computed using quarter-end balances.

9 RISK MANAGEMENT APPROACH

In executing our strategic priorities and business opportunities, the Group is faced with economic, financial and other types of risks. These risks are interdependent and require a holistic approach to risk management. Very broadly, these risks can be aligned around the following risk categories:
(i) Credit
(ii) Market
(iii) Liquidity
(iv) Operational
(v) Reputational
(vi) Business and Strategic

The Board oversees the Group's affairs and provides sound leadership for the CEO and management. Authorised by the Board, various board committees oversee specific responsibilities based on clearly defined terms of reference.

Under our risk management approaches, the Board, through the Board Risk Management Committee (BRMC), sets our risk appetite, oversees the establishment of enterprise-wide risk management policies and processes, and sets risk appetite limits to guide the Group's risk-taking. The BRMC also oversees the identification, monitoring, management and reporting of credit, market, liquidity, operational and reputational risks.

To facilitate the BRMC's risk oversight, the following risk management committees have been established:

Risk Management Committees

Risk Executive Committee (Risk ExCo)	As the overall executive body regarding risk matters, the Risk ExCo oversees the Group's risk management as a whole.
Group Credit Risk Committee (GCRC) **Group Credit Policy Committee (GCPC)** **Group Credit Risk Models Committee (GCRMC)** **Group Market and Liquidity Risk Committee (GMLRC)** **Group Operational Risk Committee (GORC)** **Group Scenario and Stress Testing Committee (GSSTC)**	Each of the committees reports to the Risk ExCo, and the committees as a whole serve as an executive forum to discuss and implement the Group's risk management. Key responsibilities: • Assess and approve risk-taking activities • Oversee the Group's risk management infrastructure, which includes frameworks, decision criteria, authorities, people, policies, standards, processes, information and systems • Approve risk policies such as model governance standards, stress testing scenarios, and the evaluation and endorsement of risk models • Assess and monitor specific credit concentration • Recommend stress testing scenarios (including macroeconomic variable projections) and review the results The members in these committees comprise representatives from the Risk Management Group (RMG) as well as key business and support units.
Product Approval Committee (PAC)	The PAC oversees new product approvals, which are vital for mitigating risk within the Group. The committee assesses the reputational risk and suitability of products. In addition, the committee assesses whether we have the appropriate systems to monitor and manage the resulting risks.

Our risk appetite takes into account a spectrum of risk types, and it is implemented using thresholds, policies, processes and controls.

Threshold structures are essential in making the Group's risk appetite an intrinsic part of our businesses, because they help to keep all our risks within acceptable levels. Portfolio risk limits for the quantifiable risk types reach all parts of the bank from the top down, and these are implemented using formal frameworks. As for the non-quantifiable risk types, these are controlled using qualitative principles.

We manage these risks by diversifying our risks across industries and individual exposures. In addition, the Group relies on specialist knowledge of our regional markets and industry segments to effectively assess our risks.

Risk appetite is managed through a capital allocation structure to monitor internal capital demand. The Group manages risks along the dimensions of customer-facing and non customer-facing units. To ensure that the thresholds pertaining to our risk appetite are completely risk-sensitive, we have adopted economic capital (EC) as our primary risk metric. EC is also a core component in our Internal Capital Adequacy Assessment Process (ICAAP).

9 RISK MANAGEMENT APPROACH (CONTINUED)

As a commercial bank, the Group allocates more EC to our customer-facing units, as compared to non customer-facing units. A buffer is also maintained for other risks as well, including country risk, operational risk, reputational risk and model risks.

The Group has three lines of defence when it comes to risk taking where each line of defence has a clear responsibility. Working closely with the support units, our business units are our first line of defence for risk management. Their responsibilities include identification and management of risks inherent in their businesses/countries and ensuring that our business operations remain within approved boundaries of our risk appetite and policies.

Corporate oversight and control functions such as RMG, Group Legal and Compliance and parts of Group Technology and Group Finance form the second line of defence. They are responsible for design and maintenance of the internal control frameworks covering financial, operational, compliance and information technology controls as well as risk management policies and systems. In addition, RMG is responsible for identifying individual and portfolio risk, approving transactions and trades and ensuring that they are within approved limits, and monitoring and reporting on the portfolio. These are carried out with a view of current and future potential developments, and evaluated through stress testing.

Group Audit forms the third line of defence. It provides an independent assessment and assurance on the reliability, adequacy and effectiveness of our system of internal controls, risk management procedures, governance framework and processes.

The Group believes that effective safeguards against undesired business conduct have to go beyond a “tick-the-box” mentality. Other than relying on published codes of conduct, the Group also advocates the following organisational safeguards to maintain a strong risk and governance culture:
- Tone from the top
- Aligning strategies and incentives via the balanced scorecard. Performance is assessed against the scorecard to determine remuneration, providing a clear line of sight between employee goals and organisational imperatives
- Respecting voice of control functions
- Risk ownership
- Having established escalation protocols
- Encouraging constructive challenges at all levels
- Reinforcing cultural alignment

In addition to cultivating a strong risk and governance culture, robust internal control processes and systems have been designed and implemented to support the respective risk management approaches. These are reviewed regularly by the respective risk units to assess and ensure their effectiveness.

Please refer to sections 11.1.2 and 14.1 for details relating to strategies and processes that the Group uses to manage, hedge and mitigate risks and for monitoring the continuing effectiveness of hedges and mitigants.

Risk management reports including exposure and position information for all significant risk areas are provided to the BRMC and management on a regular basis, as deemed appropriate. The Group, through various committees, determines the risk reporting requirements that best suit the business.

This includes the following:
(i) risk exposures and profile against risk limits and risk strategy
(ii) large risk events and subsequent remedial action plans
(iii) market developments such as macro-economic, credit, industry, country risks, emerging risk concentrations and stress tests related to these developments

Stress testing is an integral part of the Group's risk management process. It includes both sensitivity analysis and scenario analysis and is conducted regularly. In particular, the ICAAP (a group-wide exercise spanning risk types) is performed annually. On top of this, additional stress tests are carried out in response to microeconomic and macroeconomic conditions or portfolio developments. Every stress test is documented and the results are discussed at the BRMC.

Stress testing alerts the management to our potential vulnerability to exceptional but plausible adverse events. As such, stress testing enables us to assess capital adequacy and identify potentially risky portfolio segments as well as inherent systematic risks. This then allows us to develop the right contingency plans, exit strategies and mitigating actions beforehand.

The ICAAP ensures our business plans are consistent with our risk appetite. This is done by comparing the projected demand for capital to the projected supply of capital under various scenarios, including severe macroeconomic stress.

10 OVERVIEW OF RISK-WEIGHTED ASSETS

The following table sets out the Group's RWA and capital requirements.

		a	b	c
		RWA		Minimum capital requirements[(1)]
$m		31 Dec 2018	30 Sep 2018	31 Dec 2018
1	**Credit risk (excluding CCR)**	225,220	226,334	22,522
2	*of which: Standardised Approach*	*38,466*	*39,126*	*3,847*
3	*of which: F-IRBA*	*135,906*	*137,296*	*13,590*
4	*of which: supervisory slotting approach*	*39,977*	*39,089*	*3,998*
5	*of which: A-IRBA*	*10,871*	*10,823*	*1,087*
6	**CCR**	9,205	9,122	921
7	*of which: Current Exposure Method*	*7,493*	*7,472*	*750*
8	*of which: CCR Internal Models Method*	-	-	-
9	*of which: other CCR*	*1,069*	*987*	*107*
9a	*of which: CCP*	*643*	*663*	*64*
10	CVA	6,352	6,448	635
11	Equity exposures under the simple risk weight method	-	-	-
11a	Equity exposures under the IMM	-	-	-
12	Equity investments in funds – look-through approach	123	135	12
13	Equity investments in funds – mandate-based approach	27	26	3
14	Equity investments in funds – fall-back approach	#	#	#
14a	Equity investment in funds – partial use of an approach	-	-	-
15	**Unsettled transactions**	42	157	4
16	**Securitisation exposures in banking book**	818	830	82
17	*of which: SEC-IRBA*	-	-	-
18	*of which: SEC-ERBA, including IAA*	*756*	*715*	*76*
19	*of which: SEC-SA*	-	-	-
20	**Market risk**	26,170	30,313	2,617
21	*of which: SA(MR)*	*26,170*	*30,313*	*2,617*
22	*of which: IMA*	-	-	-
23	**Operational risk**	20,940	20,675	2,094
24	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	739	727	74
25	**Floor adjustment**	-	-	-
26	**Total**	289,636	294,767	28,964

\# Numbers below 0.5.

(1) Minimum capital requirements in this column correspond to 10% of the RWA in column "(a)" which is 2.0 percentage points higher than the Basel Committee’s requirement.

Total risk-weighted assets decreased in fourth quarter of 2018 due to decline in credit and market risk-weighted assets. Credit risk-weighted assets declined marginally due to better overall asset quality. The decrease in market risk-weighted assets was mainly due to a reduction in interest rate risk.

11 CREDIT RISK

11.1 Qualitative Disclosures

11.1.1 General Qualitative Disclosures

Credit risk arises from borrowers or counterparties failing to meet their debt or contractual obligations. It includes both the risk of lending, as well as the pre-settlement and settlement risk of foreign exchange, derivatives and debt securities.

RMG-Credit Risk unit, as part of RMG, acts as a second line of defence responsible for the development and maintenance of credit risk management and internal control frameworks. It provides an independent review and challenges the first line of defence (e.g. Business Units) who, together with RMG-Credit Risk Unit, are responsible for the identification, assessment and management of risk on an end-to-end basis and in conformity with approved risk appetite and policies.

Various functions under RMG-Credit Risk unit reports to the Chief Credit Officer (CCO):
- Credit risk managers approve and control credit risk and portfolio quality and ensure compliance with all applicable credit policies and procedures
- Credit control units monitor compliance with credit risk policies and standards of the Group and perform independent checks on completeness of documentation and compliance of credit conditions
- Credit remediation units are responsible for establishing, formalising and standardising the end-to-end process to identify, categorise, review and monitor problem credits

RMG-Credit Risk unit also partners the Group Legal and Compliance units to ensure all risk-taking activities abide by regulations, while Group Audit unit serves as a third line of defence to provide an independent assessment and assurance on the reliability, adequacy and effectiveness of our system of internal controls, risk management procedures, governance framework and processes.

The Group's credit risk management is supported by policies which cover credit risk management process and establish a consistent Group-wide approach for managing credit risk in a structured, systematic and consistent manner.

These policies, supplemented by a number of operational standards and guidelines, ensure consistency in identifying, assessing, underwriting, measuring, reporting and controlling credit risk across the Group and provide guidance in the formulation of business-specific and/or location-specific credit risk policies and standards.

Day-to-day monitoring of credit exposures, portfolio performance and external environmental factors potentially affecting credit risk profiles is key to the Group's philosophy of effective credit risk management. Credit trends, which may include industry analysis, early warning alerts and significant weak credits are submitted to the various risk committees. Please refer to section 9 on the risk management committees established to discuss the various risk types.

In managing its portfolio risk profile, the Group has put in place the Target Market & Risk Acceptance Criteria (TMRAC) that support the Group's portfolio strategy and ensure well-defined and consistent customer onboarding standards across the Group.

The Delegation of Authority (DOA) Standard sets out the level of credit authority required for approval of credit extension to a DOA group, taking into consideration the risk rating and total credit facility limits extended on a groupwide basis. The Group's ultimate credit authority is vested with the Board and the Group Credit Committee is delegated with the authority to approve large exposures and is the highest level of approving authority required before exposures above its DOA are recommended for approval by the Group Board Executive Committee.

The Group engages in various types of credit stress testing, and these are driven either by regulators or internal requirements and management. Independent risk management functions that report to the Chief Risk Officer (CRO) are jointly responsible for developing and maintaining a robust credit stress testing programme. These units oversee the implementation of credit stress tests as well as the analysis of the results, of which the management, various risk committees and regulators are informed.

11.1.2 Qualitative Disclosures related to CRM Techniques

The Group's policies provide detailed policy requirements and references on:
- Eligible collaterals
- Collateral valuation and valuation method
- Appointment of valuers / appraisers
- Loan-to-valuation / margin calls

Core processes for collateral evaluation include:
- Frequency of valuation for the various asset classes
- In the case of classified credits, the minimum discount to be applied to the Net Book Value / Fair Market Value
- Ownership and approving authority
- Deviations

Where possible, the Group takes collateral as a secondary source of repayment. This includes, but is not limited to, cash, marketable securities, real estate, trade receivables, inventory, equipment and other physical and/or financial collateral. The Group may also take fixed and floating charges on the assets of borrowers.

The Group's collateral is generally diversified and periodic valuations of collateral are required. Real estate constitutes the bulk of the Group's collateral, while marketable securities and cash are immaterial.

For derivatives, repurchase agreements (repo) and other repo-style transactions with financial market counterparties, collateral arrangements are typically covered under market-standard documentation, such as International Swaps & Derivatives Association (ISDA) Agreements and Master Repurchase Agreements. The collateral received is mark-to-market on a frequency the Group and the counterparties mutually agreed upon. This is governed by internal guidelines with respect to collateral eligibility. In the event of a default, the credit risk exposure is reduced by master-netting arrangements where the Group is allowed to offset what is owed to a counterparty against what is due from that counterparty in a netting-eligible jurisdiction.

Collateral held against derivatives generally consists of cash in major currencies and highly rated government or quasi-government bonds. Exceptions may arise in certain countries, where due to domestic capital markets and business conditions, the Group may be required to accept less highly rated or liquid government bonds and currencies. Reverse repo-transactions are generally limited to large institutions with reasonably good credit standing. The Group takes haircuts against the underlying collateral of these transactions that commensurate with collateral quality to ensure credit risks are adequately mitigated.

In times of difficulty, the Group will review the customers' specific situation and circumstance to assist them in restructuring their financial obligations. However, should the need arise, disposal and recovery processes are in place to dispose of collateral held. The Group maintains a panel of agents and solicitors to assist in the disposal of non-liquid assets and specialised equipment quickly.

The Group also accepts guarantees as credit risk mitigants. Internal thresholds for considering the eligibility of guarantors for credit risk mitigation are in place.

11.1.3 Qualitative Disclosures on the use of External Credit Ratings under SA(CR)

The Group uses external ratings for credit exposures under the Standardized Approach where relevant and only accepts ratings from Standard & Poor's Ratings Services, Moody's Investor Services and Fitch Ratings. There has been no change in this regard during the reporting period. The Group follows the processes prescribed in MAS Notice 637 to map the ratings to the relevant risk weights across the various asset classes under the Standardised Approach.

Where the SA(CR) exposure has an issue-specific external credit assessment, the Group uses such an assessment for calculating the applicable risk weights. Where the SA(CR) exposure does not have an issue-specific external credit assessment, a process is in place to use the available external credit ratings of comparable assets as prescribed in MAS Notice 637.

11.1.4 Qualitative Disclosures for IRBA Models

The Group adopts rating systems for the different asset classes under the IRBA. There is a robust governance process for the development, independent validation and approval of any credit risk model. The roles and responsibilities between various stakeholders in the model development and management process are articulated in the Model Risk Policy. This policy applies to the Group, including its banking subsidiaries on a global basis.

The models go through a rigorous review process before they are endorsed by the GCRMC and the Risk ExCo. They must be approved by the BRMC before being used. The key risk measures generated by the internal credit risk rating models to quantify regulatory capital include Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD). PD measures the likelihood that a borrower defaults on its credit obligation over a period of one year. LGD is the loss likely to be incurred on an exposure upon default of an obligor relative to the amount outstanding at default, i.e., EAD. EAD is the expected amount of an exposure that the Group is exposed to upon the default of an obligor. It is measured gross of specific provisions and adjusted for the risk mitigating effects of valid bilateral netting arrangements. Credit rating systems used for regulatory capital reporting under the IRBA are subject to regulatory approvals.

For portfolios under the F-IRBA, internal estimates of PD are used while the supervisory LGD and EAD estimates are applied. For retail portfolios under the A-IRBA, internal estimates of PD, LGD and EAD are used. Relevant regulatory floors are applied in regulatory capital calculation and reporting.

The performance of the rating systems is monitored regularly and reported to the GCRMC, Risk Exco and the BRMC to ensure their ongoing effectiveness. To provide assurance to the approving authority, models are periodically reviewed and/or validated by RMG-Model Validation unit. RMG-Model Validation unit also conducts formal validations for the respective rating systems annually. The validation processes are also independently reviewed by Group Audit.

Retail Portfolios

Retail portfolios are categorised into the following asset classes under the A-IRBA: residential mortgages, qualifying revolving retail exposures and other retail exposures.

A-IRBA portfolios constitute 15% of the Group's Credit EAD and 4% of Group's Credit RWA. Within each asset class, exposures are managed on a portfolio basis. Each account is assigned to a risk pool, considering factors such as borrower characteristics and collateral type. PD, EAD and LGD estimates are based on internal historical default, utilisation and realised losses within a defined period. Default is identified at facility level.

Product-specific credit risk elements such as underwriting criteria, scoring models, approving authorities and asset quality and business strategy reviews, as well as systems, processes and techniques to monitor portfolio performance, are in place. Credit risk models for secured and unsecured portfolios are also used to update the risk level of each loan on a monthly basis, reflecting the broad usage of risk models in portfolio quality reviews.

For LGD, a downturn component is explicitly estimated for each model segment using specific macroeconomic variables to time periods considered representative of downturn conditions. For on-balance sheet items (e.g., term loans or mortgage loans), EAD is equal to the current book value of the facility. For off-balance sheet transactions, (e.g., undrawn amount of revolving facility), EAD consists of the amount currently drawn and the expected utilisation of committed and undrawn amount at the time of default.

Wholesale Portfolios

Wholesale exposures are under F-IRBA for capital computation. They include sovereign, bank and corporate. Specialised lending exposures are under IRBA using supervisory slotting citeria specified in Annex 7V of MAS Notice 637.

Portfolios on F-IRB approach (excluding Specialised Lending) constitute 64% of the Group's Credit EAD and 59% of Group's Credit RWA. The risk ratings for the wholesale exposures (other than securitisation exposures) are mapped to corresponding external rating equivalents. Portfolios on SA(CR) account for 9% of Group's Credit EAD and 15% of Group's Credit RWA. Equity Exposures under SA(EQ) account for 0.4% of Group's Credit EAD and 1% of Group's Credit RWA.

Sovereign exposures are risk-rated using internal risk-rating models. The models are built through statistical methods using external data (e.g., macroeconomic information and external ratings). Factors related to country-specific macroeconomic risk, political risk, social risk and liquidity risk are included in the sovereign rating models to assess the sovereign credit risk in an objective and systematic manner.

11.1.4 Qualitative Disclosures for IRBA Models (continued)

Bank exposures are assessed using the bank rating model, a statistical model that considers both external information (financial statements, external ratings) and internal information (qualitative factors). The model considers both quantitative and qualitative factors such as capital levels and liquidity, asset quality, earnings, management and market sensitivity.

Large corporate exposures are assessed using internal rating models. It is a statistical model built based on internal data and calibrated to the long-run (~ 7 years) internal default experience. Factors considered in the risk assessment process include the counterparty's financial standing and qualitative factors such as industry risk, access to funding, market standing and management strength.

SME credit rating model is a statistical model including risk factors on the counterparty's financial position and strength as well as its account performance. The models are calibrated to the long-run (~ 7 years) internal default experience. Credit risk ratings under the IRBA portfolios are, at a minimum, reviewed by designated officer on an annual basis unless credit conditions require more frequent assessment.

11.1.5 Additional Disclosures related to the Credit Quality of Assets

The Group's credit facilities are classified as "Performing assets" or "Non-performing assets" (NPA), in accordance with the MAS Notice to Banks No. 612 "Credit Files, Grading and Provisioning" (MAS Notice 612). This is the same basis that is adopted for the Group's financial statements.

Credit exposures are categorised into one of the following five categories, according to the Group's assessment of a borrower's ability to repay a credit facility from its normal sources of income and/ or the repayment behaviour of the borrower.

Classification grade	**Description**
Performing assets	
Pass	Indicates that the timely repayment of the outstanding credit facilities is not in doubt.
Special Mention	Indicates that the borrower exhibits potential weaknesses that, if not corrected in a timely manner, may adversely affect future repayments and warrant close attention by the Group.
Classified or NPA	
Substandard	Indicates that the borrower exhibits definable weaknesses in its business, cash flow or financial position that may jeopardise repayment on existing terms.
Doubtful	Indicates that the borrower exhibits severe weaknesses such that the prospect of full recovery of the outstanding credit facilities is questionable and the prospect of a loss is high, but the exact amount remains undeterminable as yet.
Loss	Indicates that 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 assets of the borrower generally.

A default is considered to have occurred with regard to a particular borrower when either or both of the following events have taken place:

- Subjective default: Borrower is considered to be unlikely to pay its credit obligations in full, without the Group taking action such as realising security (if held)
- Technical default: Borrower is more than 90 days past due on any credit obligation to the Group

For retail borrower, the categorisation into the respective MAS loan grades is at facility level and consistent with MAS Notice 612.

The above approach is consistant with the guidance provided under MAS Notice 637.

11.1.5 Additional Disclosures related to the Credit Quality of Assets (continued)

Credit facilities are classified as restructured assets when the Group grants non-commercial concessions to a borrower because its financial position has deteriorated or is unable to meet the original repayment schedule. A restructured credit facility is classified into the appropriate non-performing grade based on the assessment of the borrower's financial condition and its ability to repay according to the restructured terms.

Such credit facilities are not returned to the performing status until there are reasonable grounds to conclude that the borrower will be able to service all future principal and interest payments on the credit facility in accordance with the restructured terms and MAS Notice 612.

11.2 Quantitative Disclosures

11.2.1 Credit Quality of Assets

The following table provides an overview of the credit quality of the Group's on and off-balance sheet assets. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2018			
		a	b	c	d
		Gross carrying amount of			
$m		Defaulted exposures	Non-defaulted exposures	Impairment allowances	Net values (a+b-c)
1	Loans[1]	5,311	391,487	4,732	392,066
2	Debt Securities	46	77,272	38	77,280
3	Off-balance sheet exposures	327	65,661	407	65,581
4	**Total**	**5,684**	**534,420**	**5,177**	**534,927**

		30 Jun 2018			
		a	b	c	d
		Gross carrying amount of			
$m		Defaulted exposures	Non-defaulted exposures	Impairment allowances	Net values (a+b-c)
1	Loans[1]	5,417	386,842	4,703	387,556
2	Debt Securities	114	75,314	63	75,365
3	Off-balance sheet exposures	339	67,000	311	67,028
4	**Total**	**5,870**	**529,156**	**5,077**	**529,949**

A default is considered to have occurred with regard to a particular borrower when either or both of the following events have taken place:

a) Subjective default: Borrower is considered to be unlikely to pay its credit obligations in full, without the Group taking action such as realising security (if held).

b) Technical default: Borrower is more than 90 days past due on any credit obligation to the Group.

11.2.2 Changes in Stock of Defaulted Loans[1] and Debt Securities

The following table provides the changes in the Group's defaulted loans and debt securities (excluding off-balance sheet exposures), including any (i) return to non-defaulted status, and (ii) reduction in defaulted exposures due to write-off. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2018
$m		a
1	**Defaulted loans and debt securities at end of the previous semi-annual reporting period**	**5,531**
2	Loans and debt securities that have defaulted since the previous semi-annual reporting period	524
3	Returned to non-defaulted status	7
4	Amounts written off	394
5	Other changes	(297)
6	**Defaulted loans and debt securities at end of the semi-annual reporting period (1+2-3-4±5)**	**5,357**

Defaulted loans and debt securities declined marginally in the second half of 2018 as higher recoveries and write offs more than offset the increase in defaulting loans and debt securities. “Other changes” (as shown above) mainly include recoveries and foreign exchange translation differences.

[1] Loans include loans and advances to customers and other assets which give rise to credit exposures.

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets

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

Breakdown by geographical areas

	31 Dec 2018	31 Dec 2017
$m	**Total**	
Singapore	224,053	212,868
Hong Kong	69,004	62,894
Rest of Greater China	81,536	82,623
South and Southeast Asia	46,150	38,459
Rest of the world	119,361	113,534
Total	**540,104**	**510,378**

Breakdown by industry

	31 Dec 2018	31 Dec 2017
$m	**Total**	
Manufacturing	53,200	46,821
Building and construction	93,534	80,570
Housing loans	79,748	79,269
General commerce	65,711	66,184
Transportation, storage and communications	40,527	39,330
Financial institutions, investment and holding companies	90,256	89,040
Government	38,261	29,957
Professional and private individuals(excluding housing loans)	27,039	25,659
Others	51,828	53,548
Total	**540,104**	**510,378**

Breakdown by residual maturity

	31 Dec 2018	31 Dec 2017
$m	**Total**	
Up to 1 year	265,304	256,809
More than 1 year	271,868	251,201
No specific maturity	2,932	2,368
Total	**540,104**	**510,378**

Increase in credit exposures was in line with the overall balance sheet growth in 2018.

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets (continued)

The following tables show the breakdown of impaired exposures, specific allowances[1] and write offs (during the year) by geographical areas and industry.

Breakdown by geographical areas

	31 Dec 2018		
$m	**Impaired exposures**	**Specific allowances**	**Write-off (during year 2018)**
Singapore	3,335	1,488	170
Hong Kong	511	258	58
Rest of Greater China	411	130	107
South and Southeast Asia	908	521	249
Rest of the world	86	43	34
Sub-total	5,251	2,440	618
Debt Securities, contingent liabilities and others	433	172	41
Total	**5,684**	**2,612**	**659**

	31 Dec 2017		
$m	**Impaired exposures**	**Specific allowances**	**Write-off (during year 2017)**
Singapore	3,191	1,322	659
Hong Kong	625	279	120
Rest of Greater China	436	131	70
South and Southeast Asia	1,078	489	277
Rest of the world	187	55	84
Sub-total	5,517	2,276	1,210
Debt Securities, contingent liabilities and others	553	243	144
Total	**6,070**	**2,519**	**1,354**

[1] Specific allowances refers to Expected Credit Loss Stage 3.

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets (continued)

Breakdown by industry

	31 Dec 2018		
$m	Impaired exposures	Specific allowances	Write-off (during year 2018)
Manufacturing	572	302	190
Building and construction	248	127	34
Housing loans	182	10	3
General commerce	645	268	79
Transportation, storage and communications	2,869	1,506	63
Financial institutions, investment and holding companies	48	18	5
Professional and private individuals(excluding housing loans)	504	129	210
Others	183	80	34
Sub-total	5,251	2,440	618
Debt Securities, contingent liabilities and others	433	172	41
Total	**5,684**	**2,612**	**659**

	31 Dec 2017		
$m	Impaired exposures	Specific allowances	Write-off (during year 2017)
Manufacturing	817	358	102
Building and construction	229	96	72
Housing loans	167	7	1
General commerce	623	231	119
Transportation, storage and communications	2,824	1,350	681
Financial institutions, investment and holding companies	66	22	10
Professional and private individuals(excluding housing loans)	491	121	123
Others	300	91	102
Sub-total	5,517	2,276	1,210
Debt Securities, contingent liabilities and others	553	243	144
Total	**6,070**	**2,519**	**1,354**

There were no significant movements in impaired exposures in 2018.

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

	31 Dec 2018	31 Dec 2017
$m	Total	
Within 90 days	2,617	2,873
Over 90 to 180 days	437	1,097
Over 180 days	3,545	2,660
Total	**6,599**	**6,630**

Credit facilities are classified as restructured assets when the Group grants non-commercial concessions to a borrower because its financial position has deteriorated or is unable to meet the original repayment schedule. A restructured credit facility is classified into the appropriate non-performing grade based on the assessment of the borrower's financial condition and its ability to repay according to the restructured terms.

The amount of impaired restructured credit exposures as at 31 December 2018 is S$1,556 million [2017: S$848 million].

11.2.4 Overview of CRM Techniques

The following table provides an overview on the Group's usage of CRM techniques.

		31 Dec 2018				
		a	b	c	d	e
$m		Exposures unsecured	Exposures secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	266,502	125,564	97,831	13,886	-
2	Debt securities	74,740	2,540	490	2,050	-
3	**Total**	**341,242**	**128,104**	**98,321**	**15,936**	**-**
4	Of which: defaulted	1,288	1,561	1,446	72	-

		30 Jun 2018				
		a	b	c	d	e
$m		Exposures unsecured	Exposures secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	258,129	129,427	97,080	15,955	-
2	Debt securities	73,535	1,830	157	1,673	-
3	**Total**	**331,664**	**131,257**	**97,237**	**17,628**	**-**
4	Of which: defaulted	1,364	1,698	1,566	85	-

The effects of credit risk mitigation techniques are presented in accordance with the requirements, including collateral eligibility and prescribed haircuts, outlined in MAS Notice 637. As such, the reported collateral value is a subset of the total collateral value and would have excluded, as an illustration, ineligible collateral types such as industrial properties located outside of Singapore, plant and machinery as well as the underlying assets financed through specialised lending.

The increase in the overall balances of loans and debt securities in the second half of 2018 was in line with the overall balance sheet growth. The decline in defaulted loans and debt securities has been explained in 11.2.2.

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

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

		31 Dec 2018					
		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and post-CRM		RWA and RWA density[1]	
		On-balance sheet amount ($m)	Off-balance sheet amount ($m)	On-balance sheet amount ($m)	Off-balance sheet amount ($m)	RWA ($m)	RWA density (%)
	Asset classes and others						
1	Cash items	4,258	-	4,258	-	9	#
2	Central government and central bank	80	-	80	-	#	#
3	PSE	259	-	340	-	135	40
4	MDB	4,411	-	4,411	-	-	-
5	Bank	350	1	396	1	202	51
6	Corporate	9,508	18,473	7,750	174	7,914	100
7	Regulatory retail	2,381	493	2,313	43	1,767	75
8	Residential mortgage	10,821	1,423	10,772	210	3,994	36
9	CRE	648	298	643	20	663	100
10	Equity - SA(EQ)	2,125	-	2,125	-	3,411	161
11	Past due exposures	373	#	373	#	484	130
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	25,018	74,225	19,778	109	19,887	100
14	**Total**	**60,232**	**94,913**	**53,239**	**557**	**38,466**	**72**

		30 Jun 2018					
		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and post-CRM		RWA and RWA density[1]	
		On-balance sheet amount ($m)	Off-balance sheet amount ($m)	On-balance sheet amount ($m)	Off-balance sheet amount ($m)	RWA ($m)	RWA density (%)
	Asset classes and others						
1	Cash items	3,910	-	3,910	-	10	#
2	Central government and central bank	91	-	91	-	#	#
3	PSE	380	-	465	-	215	46
4	MDB	4,374	-	4,374	-	-	-
5	Bank	331	2	368	#	169	46
6	Corporate	9,438	17,401	7,457	108	7,512	99
7	Regulatory retail	2,415	522	2,348	48	1,797	75
8	Residential mortgage	10,576	1,357	10,507	207	3,914	37
9	CRE	628	298	622	8	630	100
10	Equity - SA(EQ)	2,436	-	2,436	-	3,913	161
11	Past due exposures	474	#	473	#	496	105
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	25,789	68,729	20,486	111	20,679	100
14	**Total**	**60,842**	**88,309**	**53,537**	**482**	**39,335**	**73**

\# Numbers below 0.5.

[1] RWA density is calculated as total RWA divided by the exposures post-CCF and post-CRM, expressed as a percentage.

There were no significant movements in the SA(CR) and SA(EQ) RWA and RWA density in the second half of 2018.

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

The following table provides the breakdown of Group's credit risk exposures under the SA(CR) and SA(EQ) by asset class and risk weight.

		31 Dec 2018									
		a	b	c	d	e	f	g	h	i	j
		Risk weight									Total credit exposure amount (post-CCF and post-CRM)
$m		0%	10%	20%	35%	50%	75%	100%	150%	Others	
	Asset class and others										
1	Cash items	4,215	-	43	-	-	-	-	-	-	4,258
2	Central government and central bank	79	-	1	-	-	-	-	-	-	80
3	PSE	-	-	118	-	222	-	-	-	-	340
4	MDB	4,411	-	-	-	-	-	-	-	-	4,411
5	Bank	-	-	99	-	232	-	66	-	-	397
6	Corporate	-	-	3	-	15	-	7,906	-	-	7,924
7	Regulatory retail	-	-	-	-	-	2,356	-	-	-	2,356
8	Residential mortgage	-	-	-	10,712	-	100	170	-	-	10,982
9	CRE	-	-	-	-	-	-	663	-	-	663
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	2,125	2,125
11	Past due exposures	-	-	-	-	-	-	151	222	-	373
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	19,887	-	-	19,887
14	**Total**	**8,705**	**-**	**264**	**10,712**	**469**	**2,456**	**28,843**	**222**	**2,125**	**53,796**

		30 Jun 2018									
		a	b	c	d	e	f	g	h	i	j
		Risk weight									Total credit exposure amount (post-CCF and post-CRM)
$m		0%	10%	20%	35%	50%	75%	100%	150%	Others	
	Asset class and others										
1	Cash items	3,862	-	48	-	-	-	-	-	-	3,910
2	Central government and central bank	91	-	#	-	-	-	-	-	-	91
3	PSE	-	-	119	-	310	-	36	-	-	465
4	MDB	4,374	-	-	-	-	-	-	-	-	4,374
5	Bank	-	-	131	-	188	-	49	-	-	368
6	Corporate	-	-	17	-	81	-	7,467	-	-	7,565
7	Regulatory retail	-	-	-	-	-	2,396	-	-	-	2,396
8	Residential mortgage	-	-	-	10,402	-	155	157	-	-	10,714
9	CRE	-	-	-	-	-	-	630	-	-	630
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	2,436	2,436
11	Past due exposures	-	-	-	-	-	-	260	213	-	473
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	20,597	-	-	20,597
14	**Total**	**8,327**	**-**	**315**	**10,402**	**579**	**2,551**	**29,196**	**213**	**2,436**	**54,019**

\# Numbers below 0.5.

Total exposures under SA(CR) and SA(EQ) were relatively stable in the second half of 2018.

11.2.7 IRBA - Credit Risk Exposures by Portfolio and PD Range

The following tables provide the main parameters used to calculate the Group's capital requirements for its IRBA models[1].

11.2.7.1 Advanced IRBA

	31 Dec 2018											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	**Original on-balance sheet gross exposures ($m)**	**Off-balance sheet exposures pre CCF ($m)**	**Average CCF (%)**	**EAD post CRM and post-CCF ($m)**	**Average PD (%)**	**Number of obligors[2]**	**Average LGD (%)**	**Average maturity (years)**	**RWA ($m)**	**RWA density[3] (%)**	**EL ($m)**	**TEP ($m)**
Retail - QRRE												
0.00 to <0.15	628	12,824	51	7,139	0.12	669,235	93		508	7	8	
0.15 to <0.25	821	5,141	51	3,460	0.20	359,270	90		348	10	6	
0.25 to <0.50	544	2,663	41	1,646	0.42	219,475	85		287	17	6	
0.50 to <0.75	-	-	-	-	-	-	-		-	-	-	
0.75 to <2.50	1,261	4,677	61	4,108	1.53	355,832	93		2,148	52	59	
2.50 to <10.00	1,073	617	86	1,604	4.75	124,572	87		1,722	107	67	
10.00 to <100.00	528	102	80	610	20.54	39,658	92		1,447	237	114	
100.00 (Default)[4]	191	-	-	191	100.00	24,287	92		-	-	177	
Sub-total	**5,046**	**26,024**	**52**	**18,758**	**2.55**	**1,792,329**	**91**		**6,460**	**34**	**437**	**591**
Retail - Residential mortgage												
0.00 to <0.15	16,223	3,448	100	19,671	0.14	23,826	11		701	4	3	
0.15 to <0.25	8,155	27	100	8,182	0.18	23,532	12		397	5	2	
0.25 to <0.50	34,827	477	100	35,305	0.27	74,893	11		2,105	6	11	
0.50 to <0.75	449	-	-	449	0.63	764	13		58	13	#	
0.75 to <2.50	2,294	359	100	2,653	0.82	8,646	11		359	14	3	
2.50 to <10.00	702	4	100	705	3.91	1,651	13		264	37	4	
10.00 to <100.00	371	1	100	373	24.86	1,017	12		282	76	11	
100.00 (Default)[4]	137	#	100	138	100.00	446	26		-	-	36	
Sub-total	**63,158**	**4,316**	**100**	**67,476**	**0.62**	**134,775**	**11**		**4,166**	**6**	**70**	**94**
Other retail exposures												
0.00 to <0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to <0.25	1,347	-	-	1,347	0.16	33,919	22		105	8	#	
0.25 to <0.50	874	-	-	874	0.28	13,528	19		86	10	#	
0.50 to <0.75	1	-	-	1	0.64	6	40		#	35	#	
0.75 to <2.50	130	-	-	130	1.16	3,447	26		38	29	#	
2.50 to <10.00	-	-	-	-	-	-	-		-	-	-	
10.00 to <100.00	23	-	-	23	15.14	611	33		16	69	1	
100.00 (Default)[4]	2	-	-	2	100.00	38	46		-	-	1	
Sub-total	**2,377**	**-**	**-**	**2,377**	**0.47**	**51,549**	**21**		**245**	**10**	**2**	**4**
Total (all portfolios)	**70,581**	**30,340**	**59**	**88,611**	**1.03**	**1,978,653**	**29**		**10,871**	**12**	**509**	**689**

\# Numbers below 0.5.

(1) As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

(2) Number of obligors or accounts used in the respective asset classes as per the Group’s A-IRBA models.

(3) For definition of RWA density, refer to footnote of 11.2.5.

(4) For definition of default, refer to 11.2.1.

11.2.7.1 Advanced IRBA (continued)

	30 Jun 2018											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors[2]	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[3] (%)	EL ($m)	TEP ($m)
Retail - QRRE												
0.00 to <0.15	609	12,942	50	7,141	0.12	682,294	93		504	7	8	
0.15 to <0.25	791	5,120	53	3,512	0.20	360,571	91		354	10	6	
0.25 to <0.50	508	2,556	41	1,563	0.42	211,572	85		272	17	6	
0.50 to <0.75	-	-	-	-	-	-	-		-	-	-	
0.75 to <2.50	1,189	4,258	61	3,793	1.53	327,273	93		1,981	52	55	
2.50 to <10.00	1,039	566	88	1,535	4.73	119,696	88		1,645	107	64	
10.00 to <100.00	506	86	87	580	20.74	37,950	92		1,381	238	109	
100.00 (Default)[4]	187	-	-	187	100.00	24,189	92		-	-	172	
Sub-total	**4,829**	**25,528**	**53**	**18,311**	**2.51**	**1,763,545**	**91**		**6,137**	**34**	**420**	**537**
Retail - Residential mortgage												
0.00 to <0.15	15,802	4,445	100	20,247	0.14	25,057	11		721	4	3	
0.15 to <0.25	8,061	28	100	8,089	0.18	24,027	12		394	5	2	
0.25 to <0.50	34,306	490	100	34,796	0.27	73,508	11		2,092	6	11	
0.50 to <0.75	402	-	-	402	0.63	780	13		52	13	#	
0.75 to <2.50	2,769	586	100	3,355	0.93	9,700	12		519	15	4	
2.50 to <10.00	785	4	100	790	3.94	1,570	15		347	44	5	
10.00 to <100.00	351	1	100	352	24.76	971	13		276	78	11	
100.00 (Default)[4]	138	#	100	138	100.00	469	26		-	-	35	
Sub-total	**62,614**	**5,554**	**100**	**68,169**	**0.63**	**136,082**	**11**		**4,401**	**6**	**71**	**91**
Other retail exposures												
0.00 to <0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to <0.25	1,360	-	-	1,360	0.16	35,533	23		111	8	#	
0.25 to <0.50	647	-	-	647	0.28	9,766	19		66	10	#	
0.50 to <0.75	1	-	-	1	0.64	12	40		#	35	#	
0.75 to <2.50	143	-	-	143	1.16	3,779	26		43	30	#	
2.50 to <10.00	-	-	-	-	-	-	-		-	-	-	
10.00 to <100.00	29	-	-	29	14.88	762	33		20	68	1	
100.00 (Default)[4]	2	-	-	2	100.00	62	46		-	-	1	
Sub-total	**2,182**	**-**	**-**	**2,182**	**0.55**	**49,914**	**22**		**240**	**11**	**2**	**5**
Total (all portfolios)	**69,625**	**31,082**	**61**	**88,662**	**1.01**	**1,949,541**	**28**		**10,778**	**12**	**493**	**633**

\# Numbers below 0.5.

(1) As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

(2) Number of obligors or accounts used in the respective asset classes as per the Group's A-IRBA models.

(3) For definition of RWA density, refer to footnote of 11.2.5.

(4) For definition of default, refer to 11.2.1.

Total exposures and RWA density were relatively stable in the second half of 2018.

11.2.7.2 Foundation IRBA

	31 Dec 2018											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)	EL ($m)	TEP ($m)
Sovereign												
0.00 to <0.15	51,224	12	87	52,602	0.02	19	45	2	4,912	9	4	
0.15 to <0.25	-	-	-	-	-	-	-	-	-	-	-	
0.25 to <0.50	4,859	-	-	4,859	0.38	6	45	2	2,616	54	8	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	96	-	-	96	1.76	4	45	2	111	116	1	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**56,179**	**12**	**87**	**57,557**	**0.05**	**29**	**45**	**2**	**7,639**	**13**	**13**	**18**
Banks												
0.00 to <0.15	47,312	5,142	18	48,395	0.06	139	45	1	8,741	18	13	
0.15 to <0.25	1,558	41	48	1,576	0.24	26	47	1	750	48	2	
0.25 to <0.50	2,374	884	57	2,873	0.38	48	41	1	1,511	53	4	
0.50 to <0.75	1,617	278	36	1,725	0.61	15	37	1	991	57	4	
0.75 to <2.50	2,063	317	25	2,023	1.46	71	44	#	1,621	80	13	
2.50 to <10.00	208	24	20	196	3.06	11	45	#	208	106	3	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**55,132**	**6,686**	**24**	**56,788**	**0.16**	**310**	**45**	**1**	**13,822**	**24**	**39**	**52**
Corporate												
0.00 to <0.15	57,457	36,086	28	71,289	0.05	485	45	2	13,027	18	14	
0.15 to <0.25	29,213	27,742	21	34,507	0.22	406	45	2	14,765	43	34	
0.25 to <0.50	38,084	38,427	20	44,932	0.33	839	44	2	24,456	54	67	
0.50 to <0.75	15,108	11,860	18	17,179	0.56	638	43	2	11,672	68	42	
0.75 to <2.50	30,579	32,448	11	31,528	1.53	8,015	41	2	28,723	91	196	
2.50 to <10.00	8,393	4,969	11	8,313	4.23	2,764	40	2	10,061	121	139	
10.00 to <100.00	1,528	391	28	1,442	13.83	348	41	2	2,883	200	82	
100.00 (Default)[2]	3,933	324	69	4,017	100.00	540	43	2	-	-	1,739	
Sub-total	**184,295**	**152,247**	**20**	**213,207**	**2.54**	**14,035**	**44**	**2**	**105,587**	**50**	**2,313**	**3,132**
Corporate small business												
0.00 to <0.15	383	225	96	599	0.05	2	45	2	75	13	#	
0.15 to <0.25	34	317	1	86	0.22	6	45	1	27	31	#	
0.25 to <0.50	678	794	8	820	0.35	163	43	2	408	50	1	
0.50 to <0.75	938	495	16	1,023	0.56	328	41	3	686	67	2	
0.75 to <2.50	4,872	2,093	12	5,072	1.59	1,503	40	3	4,504	89	32	
2.50 to <10.00	2,024	663	9	2,029	4.36	878	40	2	2,267	112	35	
10.00 to <100.00	494	102	14	498	12.21	128	41	3	891	179	25	
100.00 (Default)[2]	337	4	75	330	100.00	103	42	1	-	-	138	
Sub-total	**9,760**	**4,693**	**15**	**10,457**	**5.44**	**3,111**	**41**	**3**	**8,858**	**85**	**233**	**316**
Total (all portfolios)	**305,366**	**163,638**	**20**	**338,009**	**1.80**	**17,485**	**44**	**2**	**135,906**	**40**	**2,598**	**3,518**

\# Numbers below 0.5.

[1] For definition of RWA density, refer to footnote of 11.2.5.

[2] For definition of default, refer to 11.2.1.

11.2.7.2 Foundation IRBA (continued)

	30 Jun 2018											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)	EL ($m)	TEP ($m)
Sovereign												
0.00 to <0.15	50,630	12	87	52,027	0.02	21	45	2	4,974	10	4	
0.15 to <0.25	-	-	-	-	-	-	-	-	-	-	-	
0.25 to <0.50	5,027	-	-	5,027	0.39	6	45	2	2,814	56	9	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	77	-	-	77	1.76	2	45	3	99	128	1	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**55,734**	**12**	**87**	**57,131**	**0.05**	**29**	**45**	**2**	**7,887**	**14**	**14**	**17**
Banks												
0.00 to <0.15	49,955	4,085	25	51,629	0.05	140	45	1	8,753	17	12	
0.15 to <0.25	1,375	62	43	1,589	0.24	18	46	1	781	49	2	
0.25 to <0.50	5,482	973	55	6,324	0.32	58	44	1	2,885	46	9	
0.50 to <0.75	202	84	42	237	0.61	8	45	1	144	61	1	
0.75 to <2.50	4,225	440	22	3,563	1.15	72	40	1	2,592	73	17	
2.50 to <10.00	125	28	20	127	3.01	9	45	#	134	105	2	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**61,364**	**5,672**	**30**	**63,469**	**0.15**	**305**	**45**	**1**	**15,289**	**24**	**43**	**53**
Corporate												
0.00 to <0.15	50,177	38,499	29	64,823	0.04	448	45	2	11,930	18	13	
0.15 to <0.25	26,695	22,946	22	32,061	0.22	362	45	2	13,649	43	32	
0.25 to <0.50	39,139	33,691	22	45,009	0.33	860	44	2	23,997	53	67	
0.50 to <0.75	14,119	12,297	18	16,596	0.56	647	43	2	11,452	69	40	
0.75 to <2.50	32,349	30,589	12	33,356	1.57	7,687	41	2	30,440	91	212	
2.50 to <10.00	8,096	4,834	9	7,202	4.36	2,618	40	2	8,812	122	124	
10.00 to <100.00	1,305	211	18	1,200	12.35	268	41	2	2,373	198	61	
100.00 (Default)[2]	4,000	325	65	4,059	100.00	536	43	2	-	-	1,762	
Sub-total	**175,880**	**143,392**	**21**	**204,306**	**2.64**	**13,426**	**44**	**2**	**102,653**	**50**	**2,311**	**2,953**
Corporate small business												
0.00 to <0.15	498	204	25	548	0.05	2	45	2	75	14	#	
0.15 to <0.25	16	333	1	19	0.22	10	39	3	7	39	#	
0.25 to <0.50	646	650	11	771	0.35	178	43	2	342	44	1	
0.50 to <0.75	857	628	13	947	0.56	340	40	3	611	64	2	
0.75 to <2.50	4,342	2,209	12	4,436	1.61	1,465	40	3	3,812	86	29	
2.50 to <10.00	2,111	647	10	2,134	4.08	849	40	3	2,334	109	35	
10.00 to <100.00	469	103	12	404	12.48	134	41	2	669	166	21	
100.00 (Default)[2]	330	9	62	326	100.00	100	42	1	-	-	138	
Sub-total	**9,269**	**4,783**	**12**	**9,585**	**5.67**	**3,078**	**41**	**3**	**7,850**	**82**	**226**	**289**
Total (all portfolios)	**302,247**	**153,859**	**21**	**334,491**	**1.81**	**16,838**	**44**	**2**	**133,679**	**40**	**2,594**	**3,312**

\# Numbers below 0.5.

(1) For definition of RWA density, refer to footnote of 11.2.5.

(2) For definition of default, refer to 11.2.1.

11.2.7.2 Foundation IRBA (continued)

Total exposures increased in the second half of 2018 driven largely by Corporate (mainly in the better asset quality range) and Corporate Small Business asset classes, partly offset by decrease in exposures in the Banks asset class.

11.2.8 IRBA - Effect on RWA of Credit Derivatives used as CRM

As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

11.2.9 IRBA - RWA Flow Statement for Credit Risk Exposures

The following table explains the change in the Group's credit RWA under IRBA for the quarter.

		31 Dec 2018
		a
$'m		RWA amounts
1	**RWA as at end of previous quarter**	**187,208**
2	Asset size	2,895
3	Asset quality [(1)]	(3,149)
4	Model updates	-
5	Methodology and Policy	-
6	Acquisitions and disposals	-
7	Foreign exchange movements	(200)
8	Other	-
9	**RWA as at end of quarter**	**186,754**

[(1)] This represents movements in RWA resulting from factors (other than exposure movements) such as changes in portfolio mix, tenor, credit risk mitigation, etc.

Total risk-weighted assets remained relatively stable during the quarter as increase in asset size was offset by better asset quality.

11.2.10 IRBA - Specialised Lending and Equities under the Simple Risk Weight Method

11.2.10.1 IRBA - Specialised Lending (Other than HVCRE)[1]

The following table provides the exposure amounts and RWA of the Group's specialised lending exposures by each asset sub-class in accordance with the supervisory slotting criteria.

31 Dec 2018												
		Specialised lending [2]										
$m		Other than HVCRE										
					Exposure amount							
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk Weight	PF	OF	CF	IPRE	Total	RWA	Expected losses
Strong	Less than 2.5 years	10,177	1,233	50%	256	-	-	10,585	10,841	5,746	-
	Equal to or more than 2.5 years	10,217	1,139	70%	2,366	220	-	8,369	10,955	8,128	44
Good	Less than 2.5 years	6,723	1,257	70%	547	86	-	6,739	7,372	5,470	29
	Equal to or more than 2.5 years	7,889	1,896	90%	1,194	258	-	7,790	9,242	8,816	74
Satisfactory		7,759	1,712	115%	1,323	93	-	7,150	8,566	10,443	240
Weak		465	98	250%	-	3	-	515	518	1,374	41
Default		238	5	0%	-	420	-	50	470	-	235
Total		**43,468**	**7,340**		**5,686**	**1,080**	**-**	**41,198**	**47,964**	**39,977**	**663**

30 Jun 2018											
		Specialised lending [2]									
$m		Other than HVCRE									
					Exposure amount						
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk Weight	PF	OF	CF	IPRE	Total	RWA	Expected losses
Strong	Less than 2.5 years	9,847	1,146	50%	561	-	-	9,953	10,514	5,572	-
	Equal to or more than 2.5 years	9,315	1,083	70%	2,401	113	-	7,418	9,932	7,370	40
Good	Less than 2.5 years	6,312	1,594	70%	398	85	-	6,806	7,289	5,409	29
	Equal to or more than 2.5 years	6,382	1,579	90%	984	274	-	6,111	7,369	7,029	59
Satisfactory		7,105	1,569	115%	980	103	-	6,767	7,850	9,568	220
Weak		951	227	250%	288	4	-	813	1,105	2,930	88
Default		215	-	0%	-	406	-	27	433	-	216
Total		**40,127**	**7,198**		**5,612**	**985**	**-**	**37,895**	**44,492**	**37,878**	**652**

[1] As at reporting date, the Group does not have any HVCRE exposures.

[2] Specialised lending is a type of exposure typically towards an entity specifically created to finance or operate physical assets where the primary source of income and repayment of the obligation lies directly with the assets being financed.

Exposures and risk-weighted assets increased in the second half of 2018 mainly due to loan growth.

11.2.10.2 IRBA – Equities under the Simple Risk Weight Method

This disclosure is not applicable as the Group did not adopt the Simple Risk Weight Method (under IRBA) for its equity exposures.

11.2.11 IRBA - Backtesting of PD per portfolio[1]

The following table shows the backtesting of PD of retail portfolios whose exposures are under A-IRBA for capital computation. The portfolios comprise of QRRE, residential mortgage and other retail exposures. PD, EAD and LGD estimates are based on internal historical defaults and realised losses within a defined period. Refer to Section 11.1.4 for key rating models used for retail exposures and the percentage of RWA covered by these models.

			31 Dec 2018				
a	b	c	d		e	f	g
			Number of obligors				
PD Range (%)	Weighted average PD (%)	Arithmetic average PD by obligors (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Retail - QRRE							
0.00 to < 0.15	0.12	0.11	659,208	669,235	467	6	0.08
0.15 to < 0.25	0.20	0.19	349,179	359,270	433	15	0.14
0.25 to < 0.50	0.41	0.40	212,864	219,475	578	9	0.27
0.50 to < 2.50	1.54	1.50	326,297	355,832	1,845	99	0.66
2.50 to < 10.00	4.54	4.52	104,618	124,572	3,810	211	3.66
10.00 to < 100.00	37.56	33.26	63,252	39,658	7,620	12	15.60
Retail - Residential mortgage							
0.00 to < 0.15	0.14	0.14	23,510	23,826	2	-	0.03
0.15 to < 0.25	0.18	0.19	23,952	23,532	9	-	0.04
0.25 to < 0.50	0.27	0.29	73,004	74,893	61	-	0.13
0.50 to < 2.50	1.08	0.91	12,781	9,410	9	-	0.08
2.50 to < 10.00	3.99	4.07	1,509	1,651	16	-	1.44
10.00 to < 100.00	24.76	24.60	910	1,017	133	-	13.52
Other retail exposures							
0.00 to < 0.15	-	-	-	-	-	-	-
0.15 to < 0.25	0.16	0.16	37,286	33,919	14	-	0.05
0.25 to < 0.50	0.28	0.28	10,831	13,528	8	-	0.09
0.50 to < 2.50	1.16	1.16	3,823	3,453	9	-	0.47
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	15.01	14.75	936	611	76	-	6.69

[1] All obligors with facilities are included.

11.2.11 IRBA - Backtesting of PD per portfolio[(1)] (continued)

	31 Dec 2017						
a	b	c	d		e	f	g
			Number of obligors				
PD Range (%)	Weighted average PD (%)	Arithmetic average PD by obligors (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Retail - QRRE							
0.00 to < 0.15	0.13	0.12	640,026	659,208	636	-	0.09
0.15 to < 0.25	0.20	0.19	366,543	349,179	557	12	0.14
0.25 to < 0.50	0.42	0.40	223,941	212,864	972	24	0.26
0.50 to < 2.50	1.55	1.48	319,309	326,297	2,517	93	0.76
2.50 to < 10.00	4.40	4.30	125,950	104,618	6,676	356	2.27
10.00 to < 100.00	21.05	22.51	37,433	63,252	6,641	30	14.42
Retail - Residential mortgage							
0.00 to < 0.15	0.14	0.14	18,535	23,510	2	-	0.09
0.15 to < 0.25	0.19	0.19	22,702	23,952	10	1	0.04
0.25 to < 0.50	0.28	0.29	67,615	73,004	75	-	0.16
0.50 to < 2.50	1.22	1.01	17,907	12,781	25	1	0.21
2.50 to < 10.00	4.21	4.19	1,348	1,509	28	-	1.07
10.00 to < 100.00	24.77	24.63	760	910	131	1	15.81
Other retail exposures							
0.00 to < 0.15	-	-	-	-	-	-	-
0.15 to < 0.25	0.16	0.16	40,279	37,286	21	.	0.05
0.25 to < 0.50	0.28	0.28	10,369	10,831	5	.	0.15
0.50 to < 2.50	1.16	1.16	5,140	3,823	30	.	0.51
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	14.52	14.40	1,215	936	78	.	6.16

[(1)] All obligors with facilities are included.

There were no significant movements in 2018.

11.2.11 IRBA - Backtesting of PD per portfolio[1] (continued)

The following table shows the backtesting of PD of wholesale portfolios whose exposures are under F-IRBA for capital computation. The portfolios comprise of sovereign, bank and corporates. Refer to Section 11.1.4 for key rating models used for wholesale exposures and the percentage of RWA covered by these models.

31 Dec 2018										
a	b			c	d	e		f	g	h
						Number of obligors				
PD Range (%)	Standard & Poor's Ratings Services	Fitch Ratings	Moody's Investor Services	Weighted average PD (%)	Arithmetic average PD by obligors (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Sovereign										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.02	0.01	24	26	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	-	-	-	-	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.39	0.39	6	6	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	-	-	-	-	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.76	1.76	2	3	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	-	-	-	-	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Banks										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.08	156	170	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.24	0.24	27	30	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.34	0.35	71	68	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	0.61	0.61	12	17	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.06	1.22	69	69	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	3.21	3.73	9	11	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Corporate										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.04	0.04	514	564	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	451	511	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.33	0.35	1,143	1,192	-	-	0.03
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	942	962	-	-	0.30
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.54	1.66	4,629	4,636	23	-	1.01
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	4.51	4.60	3,076	2,989	33	-	2.61
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	13.29	14.68	372	368	27	1	20.63
Corporate small business										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.05	2	2	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	17	11	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.38	0.38	297	225	-	-	0.04
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	416	381	-	-	0.03
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.67	1.64	1,523	1,643	8	-	0.58
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	4.22	4.39	887	960	13	-	2.07
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	12.53	12.21	111	134	12	-	9.66

[1] All obligors with facilities are included.

11.2.11 IRBA - Backtesting of PD per portfolio[1] (continued)

31 Dec 2017										
a		b		c	d	e		f	g	h
						Number of obligors				
PD Range (%)	Standard & Poor's Ratings Services	Fitch Ratings	Moody's Investor Services	Weighted average PD (%)	Arithmetic average PD by obligors (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Sovereign										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.02	0.01	27	24	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	-	-	-	-	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.39	0.39	7	6	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	-	-	-	-	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.23	0.98	3	2	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	-	-	-	-	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Banks										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.04	0.04	115	156	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.24	0.24	1	27	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.30	0.28	122	71	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	0.61	0.61	1	12	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.13	1.19	88	69	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	5.71	5.71	13	9	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Corporate										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.04	0.05	524	514	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	443	451	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.34	0.35	1,085	1,143	-	-	0.06
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	842	942	1	-	0.30
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.58	1.69	4,559	4,629	45	-	1.19
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	4.68	4.89	3,191	3,076	116	1	3.20
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	12.70	12.51	471	372	50	6	19.70
Corporate small business										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.04	0.05	2	2	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	60	17	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.36	0.37	457	297	1	-	0.04
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	373	416	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.71	1.72	1,408	1,523	8	-	0.11
2.50 to < 10.00	B+ to B-	B+ to B-	Ba1 to B3	4.10	3.93	709	887	20	-	2.22
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	13.36	12.89	88	111	13	1	26.39

[1] All obligors with facilities are included.

The average historical annual default rates have been lower or within the PD ranges.

12 COUNTERPARTY CREDIT RISK ("CCR")

12.1 Qualitative Disclosures

Counterparty Credit Risk is defined as the risk that a counterparty could default before the final settlement of the cash flows of derivatives or securities financing transactions.

Pre-settlement credit risk for traded products arising from a counterparty potentially defaulting on its obligations is quantified by evaluation of the market price, plus potential future exposure. This is included under its overall credit limits to counterparties for internal risk management.

Issuer default risk that may also arise from derivatives, notes and securities is generally measured based on jump-to-default computations.

The Group policies and related standards set out the Group's overarching requirements for guarantees and Traded Products, including Securities Trading (Equity and Debt), Over-the-counter (OTC) Derivatives Trading, Exchange Traded Derivatives and Securities Borrowings and Lendings (including repos).

Credit limits and exposures to counterparties are subject to the Group's overarching credit risk management framework. Counterparties (including Central Clearing Counterparties (CCPs) are assessed individually using an internal rating model and assigned credit risk ratings. After the credit exposures are assessed, credit limits are proposed by the business unit, and are approved by the credit risk function after an independent credit assessment. The Group's assessment for CCPs takes into consideration additional parameters including but not limited to default waterfall protection, margining process, risk management capabilities, segregation of margins, member liability provisions, regulatory oversight etc.

Counterparty credit exposures (including that of CCP exposures) are also subject to economic capital and limit allocation rules that are applied for Institutional Banking clients. Refer to section 9 for more information on capital allocation approach.

The Group actively monitors and manages our exposure to counterparties for OTC derivative trades to protect our balance sheet in the event of a counterparty default. Counterparty risk exposures that may be adversely affected by market risk events are identified, reviewed and acted upon by management, and highlighted to the appropriate risk committees.

The Group enters into master netting arrangements with counterparties where it is appropriate and feasible to do netting to mitigate counter risk. The credit risk associated with favorable contracts is reduced by a master netting arrangement to the extent that if an event of default occurs, all amounts with the counterparty are settled on a net basis. These agreements include derivative master agreements (including ISDA Master Agreement), global master repurchase agreements and global securities lending agreements. Master netting arrangements do not result in an offset of financial assets and liabilities on the balance sheet as the legal right to offset the transactions is conditional upon default.

Please refer to section 11.1.2 for details relating to collateral arrangements relating to derivatives, repurchase agreements (repo) and other repo style transactions as well as guarantees used as credit risk mitigants.

The Group also clears OTC Derivatives trades through CCPs to manage overall counterparty credit risks. In the recent years, regulatory changes requiring mandatory clearing of standardised OTC derivatives through central counterparties, have resulted in increasing volumes of trades being cleared through CCPs.

The Group's policies provide the definition and management of specific wrong-way risk (SWWR). SWWR arises when the credit exposure of a counterparty (from the traded product transaction) directly correlates with the probability of default of the counterparty. An example of SWWR is when a counterparty buys or sells its own equity share.

The Group is required to post additional collateral in the event of a rating downgrade. As at 31 December 2018, for a three-notch downgrade of the Group's Standard & Poor's Ratings Services and Moody's Investor Services ratings, we will have to post additional collateral amounting to S$189 million (2017: S$19 million).

12.2 Quantitative Disclosures

12.2.1 Analysis of CCR Exposure by Approach

The following table provides the methods used to calculate the Group's CCR capital requirements and the main parameters used for each method.

		31 Dec 2018					
		a	b	c	d	e	f
$m		Replacement cost	Potential future exposure	Effective EPE	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	Current exposure method (for derivatives)	7,314	10,822			17,724	7,493
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					19,551	1,069
5	VaR for SFTs					-	-
6	**Total**						**8,562**

		30 Jun 2018					
		a	b	c	d	e	f
$m		Replacement cost	Potential future exposure	Effective EPE	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	Current exposure method (for derivatives)	7,922	10,386			17,961	7,378
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					9,901	629
5	VaR for SFTs					-	-
6	**Total**						**8,007**

CCR exposures increased in the second half of 2018 driven by an increase in volume of securities financing transactions.

12.2.2 CVA Risk Capital Requirements

The Group adopts the standardised method to compute CVA risk capital requirements. The following table provides the exposure amount (post-CRM) and RWA.

		31 Dec 2018	
		a	b
$m		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	16,510	6,352
4	**Total portfolios subject to the CVA capital requirement**	**16,510**	**6,352**

		30 Jun 2018	
		a	b
$m		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	17,103	6,444
4	**Total portfolios subject to the CVA capital requirement**	**17,103**	**6,444**

There were no significant movements in the second half of 2018.

12.2.3 Credit Derivative Exposures

The following table provides the notional amounts (before any netting) and fair values of the Group's credit derivative exposures, broken down between credit derivatives bought or sold.

		31 Dec 2018	
		a	b
$m		Protection bought	Protection sold
	Notionals		
1	Single-name credit default swaps	7,593	9,128
2	Index credit default swaps	1,605	1,570
3	Total return swaps	7,406	-
4	Other credit derivatives	-	-
5	**Total notionals**	**16,604**	**10,698**
	Fair values		
6	Positive fair value (asset)	42	155
7	Negative fair value (liability)	77	4

		30 Jun 2018	
		a	b
$m		Protection bought	Protection sold
	Notionals		
1	Single-name credit default swaps	6,251	8,020
2	Index credit default swaps	2,777	2,831
3	Total return swaps	6,529	-
4	Other credit derivatives	-	-
5	**Total notionals**	**15,557**	**10,851**
	Fair values		
6	Positive fair value (asset)	64	136
7	Negative fair value (liability)	212	6

12.2.3 Credit Derivative Exposures (continued)

Overall increase in credit derivative exposures was driven by an increase in single name Credit Default Swaps (CDS) executed with counterparties and the resulting hedges put in place, and an increase in Total Return Swaps due to higher demand for exposures to certain credit assets from various customer segments. The increase was partly offset by decreased volumes in index CDS as offsetting trades either matured or were netted via compression services, while new trades were centrally cleared and compressed.

12.2.4 Standardised Approach - CCR Exposures by Portfolio and Risk Weights

The following table provides the breakdown of the Group's CCR exposure amounts (post-CRM) under SA(CR) by asset class and risk weight.

		31 Dec 2018								
		a	b	c	d	e	f	g	h	i
		Risk Weight								Total Credit Exposure
$m		0%	10%	20%	50%	75%	100%	150%	Others	
	Asset Classes									
1	Central government and central bank	-	-	-	-	-	-	-	-	-
2	PSE	-	-	-	-	-	-	-	-	-
3	MDB	1,620	-	-	6	-	-	-	-	1,626
4	Bank	-	-	10	#	-	2	-	-	12
6	Corporate	-	-	-	10	-	239	-	-	249
7	Regulatory retail	-	-	-	-	#	-	-	-	#
8	Other exposures	-	-	-	-	-	601	-	-	601
9	**Total**	**1,620**	**-**	**10**	**16**	**#**	**842**	**-**	**-**	**2,488**

		30 Jun 2018								
		a	b	c	d	e	f	g	h	i
		Risk Weight								Total Credit Exposure
$m		0%	10%	20%	50%	75%	100%	150%	Others	
	Asset Classes									
1	Central government and central bank	-	-	-	-	-	-	-	-	-
2	PSE	-	-	-	-	-	-	-	-	-
3	MDB	1,965	-	-	5	-	-	-	-	1,970
4	Bank	-	-	1	#	-	3	-	-	4
6	Corporate	-	-	-	#	-	277	-	-	277
7	Regulatory retail	-	-	-	-	1	-	-	-	1
8	Other exposures	-	-	-	-	-	538	-	-	538
9	**Total**	**1,965**	**-**	**1**	**5**	**1**	**818**	**-**	**-**	**2,790**

Numbers below 0.5.

There were no significant movements in the second half of 2018.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range

The following table sets out the parameters used to calculate the Group's CCR capital requirements for IRBA models. The Group adopts F-IRBA for all of its IRBA exposures which are subject to CCR capital requirements.

	31 Dec 2018						
	a	b	c	d	e	f	g
PD Range (%)	EAD post CRM ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)
Sovereign							
0.00 to <0.15	995	0.02	9	25	#	11	1
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	423	0.38	2	45	#	151	36
0.50 to <0.75	-	-	-	-	-	-	-
0.75 to <2.50	2	2.03	1	45	#	2	89
2.50 to <10.00	-	-	-	-	-	-	-
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**1,420**	**0.13**	**12**	**31**	**#**	**164**	**12**
Banks							
0.00 to <0.15	14,180	0.07	112	25	1	1,561	11
0.15 to <0.25	1,152	0.24	20	32	1	429	37
0.25 to <0.50	879	0.34	52	36	2	451	51
0.50 to <0.75	257	0.61	16	45	2	248	96
0.75 to <2.50	196	1.09	28	45	1	202	103
2.50 to <10.00	-	-	-	-	-	-	-
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**16,664**	**0.11**	**228**	**27**	**1**	**2,891**	**17**
Corporate							
0.00 to <0.15	3,025	0.08	132	37	2	638	21
0.15 to <0.25	2,982	0.22	76	25	2	861	29
0.25 to <0.50	2,069	0.34	197	41	2	1,284	62
0.50 to <0.75	456	0.56	133	44	2	346	76
0.75 to <2.50	7,565	2.20	402	6	#	1,142	15
2.50 to <10.00	143	3.09	93	22	2	98	68
10.00 to <100.00	#	12.15	9	44	2	1	205
100.00 (Default)[2]	#	100.00	5	45	2	-	-
Sub-total	**16,240**	**1.17**	**1,047**	**21**	**1**	**4,370**	**27**
Corporate small business							
0.00 to <0.15	-	-	-	-	-	-	-
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	1	0.38	12	45	3	1	70
0.50 to <0.75	4	0.56	13	45	2	2	57
0.75 to <2.50	9	1.30	88	42	1	7	78
2.50 to <10.00	3	4.98	52	25	1	2	75
10.00 to <100.00	#	12.15	2	45	1	#	188
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**17**	**1.68**	**167**	**40**	**2**	**12**	**72**
Total (all portfolios)	**34,341**	**0.61**	**1,454**	**24**	**1**	**7,437**	**22**

Numbers below 0.5.

(1) For definition of RWA density, refer to footnote of 11.2.5.

(2) For definition of default, refer to 11.2.1.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range (continued)

	30 Jun 2018						
	a	b	c	d	e	f	g
PD Range (%)	EAD post CRM ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)
Sovereign							
0.00 to <0.15	1,052	0.01	8	20	#	9	#
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	820	0.39	2	3	#	21	3
0.50 to <0.75	-	-	-	-	-	-	-
0.75 to <2.50	-	-	-	-	-	-	-
2.50 to <10.00	-	-	-	-	-	-	-
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**1,872**	**0.18**	**10**	**13**	**#**	**30**	**2**
Banks							
0.00 to <0.15	9,988	0.08	99	23	1	1,276	13
0.15 to <0.25	731	0.24	18	41	1	337	46
0.25 to <0.50	1,068	0.33	58	33	2	531	50
0.50 to <0.75	27	0.61	10	45	1	20	75
0.75 to <2.50	387	1.30	43	36	1	324	84
2.50 to <10.00	#	4.15	1	45	#	#	118
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**12,201**	**0.15**	**229**	**25**	**1**	**2,488**	**20**
Corporate							
0.00 to <0.15	2,288	0.04	115	45	3	545	24
0.15 to <0.25	3,865	0.22	75	23	1	931	24
0.25 to <0.50	2,307	0.34	228	40	2	1,307	57
0.50 to <0.75	577	0.56	133	43	2	423	73
0.75 to <2.50	1,320	1.63	410	37	1	1,114	84
2.50 to <10.00	202	4.47	102	20	2	136	68
10.00 to <100.00	#	16.31	14	45	2	1	220
100.00 (Default)[2]	27	100.00	7	5	1	-	-
Sub-total	**10,586**	**0.74**	**1,084**	**34**	**2**	**4,457**	**42**
Corporate small business							
0.00 to <0.15	#	0.05	1	45	#	#	5
0.15 to <0.25	#	-	-	-	-	-	-
0.25 to <0.50	-	0.29	8	43	1	#	29
0.50 to <0.75	2	0.56	12	40	1	1	48
0.75 to <2.50	33	1.29	76	44	1	22	67
2.50 to <10.00	2	5.17	41	39	#	2	104
10.00 to <100.00	#	12.15	4	44	1	#	151
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**37**	**1.49**	**142**	**44**	**1**	**25**	**68**
Total (all portfolios)	**24,696**	**0.41**	**1,465**	**28**	**1**	**7,000**	**28**

\# Numbers below 0.5.

[1] For definition of RWA density, refer to footnote of 11.2.5.

[2] For definition of default, refer to 11.2.1.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range (continued)

Risk-weighted assets density for CCR exposures decreased in the second half of 2018 due to an increase in securities financing transactions at low risk weights.

12.2.6 RWA Flow Statements under the CCR Internal Models Method

This disclosure is not applicable as the Group does not adopt the CCR Internal Models method.

12.2.7 Composition of Collateral for CCR Exposure

The following table provides a breakdown of all types of collateral posted or received by the Group to support or reduce the CCR exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP.

	31 Dec 2018					
	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
$m	Segregated	Unsegregated	Segregated	Unsegregated		
Cash - domestic currency	-	13	-	264	716	2,120
Cash - other currencies	-	1,825	251	2,808	5,899	14,331
Domestic sovereign debt	-	13	-	#	79	860
Other sovereign debt	-	19	-	1,602	8,299	6,269
Government agency debt	-	-	-	-	417	682
Corporate bonds	-	2	-	148	2,861	1,324
Equity securities	-	1	-	-	4,744	-
Other collateral	-	17	-	-	27	-
Total	**-**	**1,890**	**251**	**4,822**	**23,042**	**25,586**

	30 Jun 2018					
	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
$m	Segregated	Unsegregated	Segregated	Unsegregated		
Cash - domestic currency	-	83	-	434	696	2,716
Cash - other currencies	-	2,026	258	3,474	5,501	7,804
Domestic sovereign debt	-	8	-	1	259	704
Other sovereign debt	-	39	-	725	2,430	4,053
Government agency debt	-	-	-	-	39	911
Corporate bonds	-	1	-	145	2,223	107
Equity securities	-	3	-	-	4,871	-
Other collateral	-	11	-	-	19	-
Total	**-**	**2,171**	**258**	**4,779**	**16,038**	**16,295**

Numbers below 0.5.

The increase in collateral used in securities financing transactions during the second half of 2018 was mainly due to increase in volume of such transactions.

13 SECURITISATION

13.1 Qualitative Disclosures

The Group arranges securitisation transactions for its clients, primarily as a way of providing alternative capital market solutions and for fees. These transactions do not involve special-purpose entities which the Group controls or to which it acts as a sponsor.

For transactions that are not underwritten, no securitisation exposures are assumed as a direct consequence of arranging the transactions. Any decision to invest in any of such arranged transactions is subject to independent risk assessment. Where the Group provides an underwriting commitment, any securitisation exposure that arises is held in the trading book to be traded or sold down in accordance with our internal policy and risk limits.

The Group invests in its clients' securitisation transactions from time to time. These may include securitisation transactions arranged by it or other parties. We may also act as a working capital facility provider or swap counterparty. Such exposures require the approval of RMG, and are subject to regular risk reviews after they take place. The Group has processes in place to monitor the credit risk of its securitisation exposures.

In addition, the Group does not provide implicit support for any transactions it structures or has invested in.

The Group's securitisation positions are recognised as financial assets pursuant to the Group's accounting policies and valued accordingly. Please refer to the financial statements in the latest available annual report on the Group's accounting policies on financial assets.

Securitisation exposures in the banking and trading books are risk-weighted using either the External Ratings-Based Approach, which utilises, where available, ratings from Fitch Ratings, Moody's Investor Services and/or Standard & Poor's Ratings Services, or by applying a risk weight of 1250% to those exposures for which the External Ratings-Based Approach cannot be applied.

13.2 Quantitative Disclosures

13.2.1 Securitisation Exposures in the Banking Book

The following table provides an overview of the Group's securitisation exposures in the Banking book. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2018	30 Jun 2018
		a	
		A Reporting Bank acts as investor	
$m		Traditional[(1)]	
1	**Total retail**	**2,425**	**2,499**
2	of which: residential mortgage	-	2
3	of which: credit card	2,067	2,196
4	of which: other retail exposures	358	301
5	**Total wholesale**	**136**	**136**
6	of which: loans to corporates	-	-
7	of which: commercial mortgage	-	-
8	of which: lease and receivables	-	-
9	of which: other wholesale	136	136

There were no significant movements in the second half of 2018.

13.2.2 Securitisation Exposures in the Trading Book

The following table provides an overview of the Group's securitisation exposures in the Trading book. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2018	30 Jun 2018
		a	
		A Reporting Bank acts as investor	
$m		Traditional[(1)]	
1	**Total retail**	**16**	**17**
2	of which: residential mortgage	15	17
3	of which: credit card	-	-
4	of which: other retail exposures	1	-
5	**Total wholesale**	**11**	**-**
6	of which: loans to corporates	-	-
7	of which: commercial mortgage	-	-
8	of which: lease and receivables	-	-
9	of which: other wholesale	11	-

[(1)] The Group does not invest in synthetic securitisation structures.

There were no significant movements in the second half of 2018.

13.2.3 Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements - A Reporting Bank acting as Originator or as Sponsor

The Group did not act as an Originator or a Sponsor for its securitisation exposures in the Banking book.

13.2.4 Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements - A Reporting Bank acting as an Investor

The following table provides the exposure amounts, RWA and capital requirements of the Group's securitisation exposures in the Banking book.

	31 Dec 2018																	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by risk weight bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap[(1)]			
$m		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%
1	**Total exposures**	**2,012**	**32**	**330**	**143**	**5**	**-**	**2,516**	**-**	**5**	**-**	**756**	**-**	**62**	**-**	**76**	**-**	**6**
2	**Traditional securitisation**	2,012	32	330	143	5	-	2,516	-	5	-	756	-	62	-	76	-	6
3	Of which: securitisation	2,012	32	330	143	5	-	2,516	-	5	-	756	-	62	-	76	-	6
4	Of which: retail underlying	2,012	32	194	143	5	-	2,380	-	5	-	667	-	62	-	67	-	6
5	Of which: wholesale	-	-	136	-	-	-	136	-	-	-	89	-	-	-	9	-	-
6	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	**Synthetic securitisation**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10	Of which: securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which: retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which: wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	30 Jun 2018																	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by risk weight bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap[(1)]			
$m		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%
1	**Total exposures**	**2,178**	**58**	**256**	**94**	**9**	**-**	**2,586**	**-**	**9**	**-**	**659**	**-**	**115**	**-**	**66**	**-**	**12**
2	**Traditional securitisation**	2,178	58	256	94	9	-	2,586	-	9	-	659	-	115	-	66	-	12
3	Of which: securitisation	2,178	58	256	94	9	-	2,586	-	9	-	659	-	115	-	66	-	12
4	Of which: retail underlying	2,178	58	120	94	9	-	2,450	-	9	-	570	-	115	-	57	-	12
5	Of which: wholesale	-	-	136	-	-	-	136	-	-	-	89	-	-	-	9	-	-
6	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	**Synthetic securitisation**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10	Of which: securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which: retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which: wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Numbers below 0.5.

[(1)] Capital charge after cap in these columns correspond to 10% of the relevant RWA figures in column “(j)”, “(k)”, “(l)” and “(m)” which are 2.0 percentage points higher than the Basel Committee’s requirement.

There were no significant movements in the second half of 2018.

14 MARKET RISK

14.1 Qualitative Disclosures

Market risk arises from adverse changes in interest rates, foreign exchange rates, equity prices, credit spreads and commodity prices as well as related factors. The Group's exposures in the trading portfolios are from the undertaking of trading activities, for the purpose of market-making, client-facilitation and benefiting from market opportunities.

The Group adopts the Value-at-Risk (VaR) model to monitor market risk. The VaR model is based on historical simulation with a one-day holding period. It is a method that computes the potential losses of risk positions as a result of market movement over a specified time horizon and according to a given level of confidence. The Group conducts backtesting to verify the predictiveness of the VaR model. We use Expected Shortfall (ES), which is the average of potential loss beyond a given level of confidence, to monitor and limit market risk exposures, as well as to monitor net open positions net of hedges. To monitor the Group's vulnerability to unexpected but plausible extreme market risk-related events, we conduct multiple market risk stress tests regularly.

The Group uses a variety of financial derivatives such as swaps, forwards and futures, and options for trading and hedging against movements in interest rates, foreign exchange rates, equity prices and other market risks of the Group's (a) investments, (b) maturity mismatches between loans and deposits, (c) structured product issuances, and (d) other assets and liabilities.

Independent monitoring of the Group's market risk (including interest rate risk in the banking book) is the responsibility of the RMG-Market and Liquidity Risk unit. The unit monitors, controls and analyses the Group's market risk (including interest rate risk in the banking book) regularly.

Please refer to section 9 on the risk management committees established to discuss the various risk types.

Internal control processes and systems have been designed and implemented to support our Group's market risk management approach. We review these control processes and systems regularly, and these reviews allow the management to assess their effectiveness.

The Group does not adopt Internal Models Approach (IMA) to measure its regulatory capital requirements for market risk.

14.2 Quantitative Disclosures

14.2.1 Market Risk under Standardised Approach

The following table provides the components of the Group's market risk RWA as measured under the Standardised Approach.

$m		31 Dec 2018	30 Jun 2018
		a	
		RWA[1]	
	Products excluding options		
1	Interest rate risk (general and specific)	14,722	20,108
2	Equity risk (general and specific)	232	348
3	Foreign exchange risk	5,579	5,562
4	Commodity risk	24	20
	Options		
5	Simplified approach	-	-
6	Delta-plus method	-	-
7	Scenario approach	5,550	7,084
8	**Securitisation**	63	-
9	**Total**	**26,170**	**33,122**

[1] The RWA is derived by multiplying the capital requirements by 12.5.

The decrease in market risk-weighted assets was mainly due to a reduction in interest rate risk.

14.2.2 RWA Flow Statements of Market Risk Exposures under IMA, IMA Values for Trading Portfolios and Comparison of VaR Estimates with Gains or Losses

The Group did not adopt IMA to measure its regulatory capital requirements for market risk.

15 OPERATIONAL RISK

Operational risk is inherent in our business activities and it may arise from inadequate or failed internal processes, people, systems, or from external events.

The Group's objective is to keep operational risk at appropriate levels, taking into account the markets we operate in, the characteristics of the businesses as well as our economic and regulatory environment.

Robust internal control processes and systems are integral to identifying, monitoring, managing and reporting operational risk.

The RMG-Operational Risk unit and other corporate oversight and control functions,
- oversee and monitor the effectiveness of operational risk management,
- assess key operational risk issues with the units and
- report and/or escalate key operational risks to relevant risk committees and recommend appropriate risk mitigation strategies.

Please refer to Section 9 on the risk management committees established to discuss the various risk types.
The Group Operational Risk Management (ORM) Policy sets our overall approach for managing operational risk in a structured, systematic and consistent manner.

There are policies, standards, tools and programmes in place to govern ORM practices across the Group. These include corporate operational risk policies and standards that are owned by the respective corporate oversight and control functions. The key policies address risk areas relating to technology, compliance, fraud, money laundering, financing of terrorism and sanctions, new product and outsourcing.

The Group adopts the standardised approach to compute operational risk regulatory capital.

To manage and control operational risk, we use various tools, including risk and control self-assessment, operational risk event management and key risk indicator monitoring.

The Group’s three lines of defense adopt one common risk taxonomy, and a consistent risk assessment approach to manage operational risk. Risk and control self-assessment is conducted by each business or support unit to identify key operational risk and assess the effectiveness of internal controls. When control issues are identified, the units develop action plans and track the resolution of the issues.

Operational risk events are classified in accordance with Basel standards. Such events, including any significant incidents that may impact the Group's reputation, must be reported based on certain established thresholds. Key risk indicators with pre-defined escalation triggers are employed to facilitate risk monitoring in a forward-looking manner.

Additional methodologies are in place to address subject-specific risks, including, but not limited to, the following:

Technology risk
Information Technology (IT) risk is managed through an enterprise technology risk approach. This covers risk governance, communication, monitoring, assessment, mitigation and acceptance, and is supported by a set of IT policies and standards, control processes and risk mitigation programmes. Along with the bank’s digital journey and the evolving cyber risk landscape, we have defined a dedicated cybersecurity platform team to address cyber risk in a holistic manner along with the alignment of the Chief Information Security Officer (CISO) function into the cybersecurity platform.

Compliance risk
Compliance risk refers to the risk of the Group not being able to successfully conduct our business because of any failure to comply with laws, regulatory requirements, industry codes or standards of business and professional conduct applicable to the financial sector.

This includes, in particular, laws and regulations applicable to the licensing and conducting of banking or other financial businesses, financial crime such as anti-money laundering and countering the financing of terrorism, fraud and bribery/ corruption. We maintain a compliance programme designed to identify, assess, measure, mitigate and report on such risks through a combination of policy and relevant systems and controls.

The Group also provides relevant training and implements assurance processes. We strongly believe in the need to promote a strong compliance culture as well, and this is developed through the leadership of our Board and management.

15 OPERATIONAL RISK (CONTINUED)

Fraud risk

The Group has established minimum standards for our business and support units to prevent, detect, investigate and remediate fraud and related events. This is based on the Fraud Management Programme, through which standards are implemented at the unit and geographical levels. These standards aim to provide end-to-end management for fraud and related issues within the Group.

Money laundering, financing of terrorism and sanctions risks

There are minimum standards for our business and support units to mitigate and manage our actual and/or potential exposure to money laundering, terrorist financing, sanctions, corruption, or other illicit financial activities. Accountabilities have also been established for the protection of the Group's assets and reputation, as well as the interests of our customers and shareholders.

New product and outsourcing risks

Each new product, service or outsourcing initiative is subject to a risk review and signoff process, where relevant risks are identified and assessed by departments independent of the risk-taking unit proposing the product or service. Variations of existing products or services and outsourcing initiatives are also subject to a similar process.

Other mitigation programmes

To manage business disruptions effectively, business continuity management is vital as part of the Group's risk mitigation programme.

A robust business continuity management programme is in place to ensure that essential banking services can continue in the event of unforeseen events or business disruptions. Planning for business resilience includes the identification of key business processes and resources via Business Impact Analysis and documented in the Business Continuity Plan (BCP).

The Group's BCP aims to minimise the impact of business interruption stemming from severe loss scenarios, and provide a reasonable level of service until normal business operations are resumed. Within the crisis management structure, an incident management process is established, which provides guidance on incident severity assessment, roles and responsibilities of process owners and escalation protocols for the effective management of a crisis.

Exercises are conducted annually, simulating different scenarios to test BCPs and crisis management protocol. These scenarios include technology issues affecting essential banking services across the Group, natural disasters with wide geographical impact, safety-at-risk incidents (e.g., terrorism) and other events leading to significant business disruption. The effectiveness of these exercises, as well as the Group's business continuity readiness, our alignment to regulatory guidelines and our disclosure of residual risks, are communicated and attested by senior management to the BRMC on an annual basis.

To mitigate losses from specific unexpected and significant event risks, the Group purchases group-wide insurance policies – under the Group Insurance Programme – from third party insurers. The Group has acquired insurance policies relating to crime and professional indemnity, directors and officers liability, cyber risk, property damage and business interruption, general liability and terrorism.

16 INTEREST RATE RISK IN THE BANKING BOOK

The Group uses Expected Shortfall and Net Interest Income variability as key risk metrics to manage our assets and liabilities. Credit risk arising from loans and receivables is managed under the credit risk management framework.

Internal control processes and systems have been designed and implemented to support our market risk management approach. The Group reviews these control processes and systems regularly, and these reviews allow management to assess their effectiveness.

The Group uses derivative contracts mainly as part of its risk management strategies for hedging interest rate risk arising from maturity mismatches or for hedging currency risk arising from currency mismatches and cash flows in foreign currencies.

We manage banking book interest rate risk arising from mismatches in the interest rate profiles of assets, liabilities and capital instruments (and associated hedges), which includes basis risk arising from different interest rate benchmarks, interest rate repricing risk, yield curve risk and embedded optionality. Behavioural assumptions are applied when managing the interest rate risk of banking book deposits with indeterminate maturities. The Group measures interest rate risk in the banking book on a weekly basis.

The key market risk drivers of our non-trading portfolios are SGD and USD interest rate positions. The economic value impact of changes in interest rates was assessed with plausible rates movements and characteristics of the non-trading portfolio assets and liabilities. The economic value changes based on the worse of an upward or downward parallel shift in the yield curve of 100 basis points and 200 basis points were negative S$1,219 million and negative S$2,305 million [2017: negative S$1,221 million and S$2,311 million] respectively.

17 REMUNERATION

Remuneration disclosures are disclosed in the 2018 annual report which is available at https://www.dbs.com/investor/group-annual-reports.html.

The following table signposts the disclosure requirements to the relevant pages and sections in the 2018 annual report.

Disclosure requirements	Reference in 2018 Annual Report
MAS Notice 637 Table 11-44: Remuneration Policy	
Name, composition and mandate of the main body overseeing remuneration	Page 47, 51 and 52; sub section on Compensation and Management Development Committee
External consultants engagement in the remuneration process	Page 59; section 5; para 3
Scope of the remuneration policy	Page 57; section 1
Types of employees considered as material risk-takers and as senior managers	Page 60; section 5; footnote (1 and 2)
Information relating to the design and structure of remuneration processes.	Page 57 to 59; section 1 to 4; Page 51 and 52, sub section on Compensation and Management Development Committee
Description of the ways in which current and future risks are taken into account in the remuneration process	Page 57 to 59; section 2 to 4
Description of the ways the Group seeks to link performance during a performance masurement period with levels of remunerations	Page 57 to 61; section 2 to 5
Description of the ways in which the Group seeks to adjust remuneration to take account of longer-term performance.	Page 57 to 59; section 2 and 4
Description of the different forms of variable remuneration that the Group utilises and the rationale for using these different forms.	Page 57 to 59; section 2 to 4
MAS Notice 637 Table 11-44A: Remuneration Awarded during the Financial Year	
Quantitative information on renumeration for the financial year	Page 60; section 5; table and pie chart under "Breakdown of deferred remuneration awards"
MAS Notice 637 Table 11-44C: Special Payments	
Quantitative information on special payments for the financial year	Page 61; section 5; table "Guaranteed bonuses, sign-on bonuses and severance payments"
MAS Notice 637 Table 11-44E: Deferred Remuneration	
Quantitative information on deferred and retained remuneration	Page 60; section 5; table "Breakdown of deferred remuneration awards"

PART B: LIQUIDITY COVERAGE RATIO (“LCR”) DISCLOSURES (FOR DBS BANK GROUP)

The following disclosures for the DBS Bank Group[(1)] are made pursuant to the Monetary Authority of Singapore (“MAS”) Notice to Banks No. 651 “Liquidity Coverage Ratio (“LCR”) Disclosure” (“MAS Notice 651”).

DBS Bank Group ("DBS") has been subjected to the Basel III Liquidity Coverage Ratio (“LCR”) standards from 1 January 2015, pursuant to MAS Notice 649. At the all-currency level, DBS is required to maintain daily LCR above an initial 60%, with a 10 percentage point step-up each year to 100% on 1 January 2019. The all-currency LCR minimum for 2018 is 90%. DBS is also required to maintain daily Singapore dollar (“SGD”) LCR above 100%.

LCR aims to ensure that a bank has an adequate stock of unencumbered High Quality Liquid Assets (“HQLA”) to meet its liquidity needs for a 30-calendar day liquidity stress scenario. MAS Notice 649 stipulates the range of liquid assets that qualify as HQLA, as well as the applicable haircuts for each category. Net cash outflows are computed using the standardized 30-day cash flow rates defined in the same notice. The amounts after the application of haircuts or 30-day cash flow rates are reflected in the “weighted amount” column of the tables in this part.

DBS seeks to ensure that its LCR remains above the specified regulatory minimum requirements. This is achieved by:

(i) Establishing internal early warning triggers and thresholds based on observed movements in LCR over time;

(ii) Monitoring and managing the LCR closely to ensure it stays within established boundaries; and

(iii) Strategically managing the liquidity risk arising from the balance sheet structure.

[(1)] Pursuant to Sections 36 and 38 of the Banking Act, and as outlined in MAS Notice 649, DBS Bank complies with the LCR requirements on a consolidated (“DBS Bank Group”) level, which includes the assets and liabilities of its banking subsidiaries.

1.1 Average All-Currency LCR for the Quarter ended 31 December 2018

(Number of data points: 92)

$m		31 Dec 2018 UNWEIGHTED[1]	31 Dec 2018 WEIGHTED VALUE
HIGH-QUALITY LIQUID ASSETS			
1	**Total high-quality liquid assets (HQLA)**		**85,944**
CASH OUTFLOWS			
2	**Retail deposits and deposits from small business customers, of which**	**198,387**	**16,516**
3	Stable deposits	65,512	3,229
4	Less stable deposits	132,875	13,287
5	**Unsecured wholesale funding, of which**	**146,339**	**77,288**
6	Operational deposits (all counterparties) and deposits in institutional networks of cooperative banks	24,777	5,945
7	Non-operational deposits (all counterparties)	117,316	67,097
8	Unsecured debt	4,246	4,246
9	**Secured wholesale funding**		**1,198**
10	**Additional requirements, of which**	**53,766**	**11,787**
11	Outflows related to derivatives exposures and other collateral requirements	11,950	6,780
12	Outflows related to loss of funding on debt products	-	-
13	Credit and liquidity facilities	41,816	5,007
14	**Other contractual funding obligations**	**2,150**	**2,117**
15	**Other contingent funding obligations**	**26,216**	**787**
16	**TOTAL CASH OUTFLOWS**		**109,693**
CASH INFLOWS			
17	**Secured lending (e.g. reverse repos)**	**9,064**	**514**
18	**Inflows from fully performing exposures**	**68,061**	**42,053**
19	**Other cash inflows**	**8,503**	**4,914**
20	**TOTAL CASH INFLOWS**	**85,628**	**47,481**
		TOTAL ADJUSTED VALUE	
21	**TOTAL HQLA**		**85,944**
22	**TOTAL NET CASH OUTFLOWS**		**62,212**
23	**LIQUIDITY COVERAGE RATIO (%)**[2]		**138%**

[1] The unweighted amounts refer to cash flows due or callable within 30 days, with the exception of items in rows 13 and 15 which reflect the full notional balances.

[2] The LCR is computed as an average of observations of LCR during the quarter. This may not be equal to an LCR computed with the average values of HQLA and net cash outflows disclosed in the table.

1.2 Average SGD LCR for the Quarter ended 31 December 2018
(Number of data points: 92)

$m		31 Dec 2018 UNWEIGHTED[1]	31 Dec 2018 WEIGHTED VALUE
HIGH-QUALITY LIQUID ASSETS			
1	**Total high-quality liquid assets (HQLA)**		**34,327**
CASH OUTFLOWS			
2	**Retail deposits and deposits from small business customers, of which**	**129,450**	**10,467**
3	Stable deposits	49,560	2,478
4	Less stable deposits	79,890	7,989
5	**Unsecured wholesale funding, of which**	**25,668**	**10,969**
6	Operational deposits (all counterparties) and deposits in institutional networks of cooperative banks	11,042	2,657
7	Non-operational deposits (all counterparties)	14,468	8,154
8	Unsecured debt	158	158
9	**Secured wholesale funding**		**-**
10	**Additional requirements, of which**	**19,417**	**7,979**
11	Outflows related to derivatives exposures and other collateral requirements	7,155	6,986
12	Outflows related to loss of funding on debt products	-	-
13	Credit and liquidity facilities	12,262	993
14	**Other contractual funding obligations**	**67**	**67**
15	**Other contingent funding obligations**	**3,061**	**92**
16	**TOTAL CASH OUTFLOWS**		**29,574**
CASH INFLOWS			
17	**Secured lending (e.g. reverse repos)**	**510**	**117**
18	**Inflows from fully performing exposures**	**12,526**	**7,169**
19	**Other cash inflows**	**15,765**	**15,686**
20	**TOTAL CASH INFLOWS**	**28,801**	**22,972**
		TOTAL ADJUSTED VALUE	
21	**TOTAL HQLA**		**34,327**
22	**TOTAL NET CASH OUTFLOWS**[1]		**8,011**
23	**LIQUIDITY COVERAGE RATIO (%)**[2]		**438%**

[1] Total net cash outflows does not equal to the total cash outflows minus total cash inflows as the cap on inflows is binding. Cash inflows may be netted against cash outflows up to an aggregate cap of 75% of total cash outflows.

[2] The LCR is computed as an average of observations of LCR during the quarter. This may not be equal to an LCR computed with the average values of HQLA and net cash outflows disclosed in the table.

1.3 Liquidity Coverage Ratio

In the fourth quarter of 2018, the average all-currency and SGD LCRs were 138% and 438% respectively. Compared to the third quarter, the average all-currency LCR increased from 132% while the average SGD LCR reduced from 472%:

(i) All-currency LCR increased due to increase in Level 1 and Level 2A HQLA holdings
(ii) SGD LCR decreased mainly due to reduction in cash inflows from maturing derivative positions and increase in cash outflows from wholesale deposits

The LCR remains well above the regulatory minimum requirements of 90% and 100% for all-currency and SGD respectively. DBS maintains a healthy liquidity position by keeping a stable balance sheet structure that is supported by a diversified funding base.

DBS' LCR is sensitive to (i) balance sheet movements resulting from commercial loan/deposit activities and wholesale inter-bank lending/ borrowing; and (ii) movements due to positions falling into or out of the LCR 30-day tenor, such as loan rollovers. LCR is also sensitive to movements in HQLA, driven primarily by changes in balances with central banks and collaterals from secured lending and borrowing transactions.

a) Composition of High Quality Liquid Assets ("HQLA")

DBS holds a pool of unencumbered HQLA that are readily available to meet cash flow obligations under stress scenarios, as defined in the LCR rules. These liquid assets consist predominantly of Level 1 HQLA, which comprises cash, balances with central banks and highly rated bonds issued by governments or supranational entities. These may be included, without haircuts or limitations in quantum, in the total pool of HQLA.

DBS' HQLA include Singapore government securities and local government/central bank securities held at overseas branches and subsidiaries. This is supplemented by bonds issued by highly rated corporate issuers (including public sector entities), as well as covered bonds issued by reputable financial institutions.

b) Concentration of Funding Sources

DBS strives to develop a diversified funding base with access to funding sources across retail and wholesale channels. DBS' funding strategy is anchored on strengthening the core deposit franchise as the foundation of its long-term funding advantage. Please refer to the risk management disclosures in the latest available annual report for more information on DBS' funding strategy.

c) Derivative Exposures and Potential Collateral Calls

DBS actively manages its over-the-counter ("OTC") and exchange-traded financial derivative exposures arising from market making, trading activities, and its commercial business (including structuring and packaging products for investors and clients). Derivative exposures are mainly from, but not limited to, interest rate swaps and futures, foreign exchange forwards and swaps, and currency swaps. These derivative positions are marked-to-market daily, affecting the collateral amounts posted to and received from interbank counterparties and/or exchanges. Cash flows resulting from potential changes in collateral amounts posted/received are incorporated into LCR net cash outflows.

1.3 Liquidity Coverage Ratio (continued)

d) Currency Mismatch

As part of its funding strategy, DBS makes use of the swap markets to support funding needs across currencies. DBS' stable funding base of customer deposits is predominantly denominated in the local currency of its key operating locations. A core SGD deposit funding provides surplus funds that are swapped into other currencies to support loan demand. Matching the deposit funding currency, the main portion of DBS' liquid assets is denominated in SGD and the local currencies of key operating locations.

e) Centralization of Liquidity Management

In managing funding needs across locations, overseas branches and subsidiaries are encouraged but not required to centralise majority of their borrowing and deployment of funds with Head Office, taking into account the relevant regulatory restrictions while maintaining a commensurate level of presence and participation in the local funding markets.

By managing the liquid assets as a pool, DBS is able to monetize liquid assets to meet liquidity shortfalls under times of stress.

Please refer to the latest available annual report for more information on DBS' liquidity risk management.

PART C: NET STABLE FUNDING RATIO ("NSFR") DISCLOSURES (FOR DBS BANK GROUP)

The following disclosures for the DBS Bank Group[1] are made pursuant to the Monetary Authority of Singapore ("MAS") Notice to Banks No. 653 "Net Stable Funding Ratio ("NSFR") Disclosure" ("MAS Notice 653").

DBS Bank Group ("DBS") has been subjected to the Basel III NSFR standards from 1 January 2018, pursuant to MAS Notice to Banks No. 652 "Net Stable Funding Ratio (NSFR)" ("MAS Notice 652"). At the all-currency level, DBS is required to maintain NSFR of at least 100% on an ongoing basis.

NSFR aims to improve the resiliency of banks by promoting long term funding stability. It requires banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities. MAS Notice 652 stipulates the applicable Required Stable Funding ("RSF") factor for each category of asset and Available Stable Funding ("ASF") factor for each type of funding source. NSFR represents the ratio of the bank's ASF to RSF. The breakdown of the bank's ASF and RSF amounts after applying the respective ASF or RSF factors are reflected in the "weighted amount" column of the tables in this part.

In the fourth quarter of 2018, the all-currency NSFR was 109%, no change from the third quarter. NSFR remains well above the regulatory minimum requirement of 100%. DBS maintains a healthy liquidity position by keeping a stable balance sheet structure that is supported by a diversified funding base.

Compared to the previous quarter, both the ASF and RSF for the fourth quarter of 2018 increased mainly due to growth in long-term customer loans, as well as retail and wholesale deposits. DBS' NSFR is sensitive to (i) balance sheet movements resulting from commercial loan and deposit activities, and (ii) movements due to positions falling into the NSFR 1-year tenor, such as when the residual maturity of capital or senior issuances fall within the 1 year tenor. DBS recognized interdependent assets and liabilities from the fourth quarter of 2018 onwards, which comprise primarily of bills receivable and payable under letters of credit.

DBS seeks to ensure that its NSFR remains above the specified regulatory minimum requirements. This is achieved by:

(i) Monitoring the NSFR closely against an established internal early warning trigger and management target

(ii) Managing and developing strategies to build a diversified funding base with access to funding sources across retail and wholesale channels

Please refer to the Risk Management disclosures in the latest available annual report for more information on DBS' funding strategy.

[1] Pursuant to Sections 36 and 55 of the Banking Act, and as outlined in MAS Notice 652, DBS Bank complies with the NSFR requirements on a consolidated ("DBS Bank Group") level, which includes the assets and liabilities of its banking subsidiaries.

1.1 NSFR Disclosure Template

$m		31 Dec 2018 Unweighted value by residual maturity: No maturity [(1)]	< 6 months	6 months to < 1 yr	≥ 1yr	WEIGHTED VALUE
ASF Item						
1	Capital:	**56,305**	**-**	**-**	**409**	**56,714**
2	Regulatory capital	54,798	-	-	-	54,798
3	Other capital instruments	1,507	-	-	409	1,916
4	Retail deposits and deposits from small business customers:	**160,114**	**47,855**	**2,115**	**1,054**	**192,856**
5	Stable deposits	52,379	2,099	48	119	51,918
6	Less stable deposits	107,735	45,756	2,067	935	140,938
7	Wholesale funding:	**75,834**	**148,807**	**12,281**	**11,650**	**78,750**
8	Operational deposits	23,635	-	-	-	11,818
9	Other wholesale funding	52,199	148,807	12,281	11,650	66,932
10	Liabilities with matching interdependent assets	**-**	**974**	**-**	**-**	**-**
11	Other liabilities:	**12,999**		**5,327**		**2,253**
12	NSFR derivative liabilities			3,161		
13	All other liabilities and equity not included in the above categories	12,999	5	-	2,161	2,253
14	Total ASF					330,573
RSF Item						
15	Total NSFR high-quality liquid assets (HQLA)					**12,216**
16	Deposits held at other financial institutions for operational purposes	**161**	**-**	**-**	**-**	**80**
17	Performing loans and securities:	**11,181**	**133,605**	**31,493**	**243,117**	**265,776**
18	Performing loans to financial institutions secured by Level 1 HQLA	-	7,545	-	-	755
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	3,930	26,873	5,467	6,934	14,287
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	7,251	91,082	15,101	148,796	178,628
21	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	24,948	1,705	3,054	14,982
22	Performing residential mortgages, of which:	-	2,655	1,664	69,154	49,252

[(1)] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

1.1 NSFR Disclosure Template (continued)

$m		31 Dec 2018				
		Unweighted value by residual maturity				WEIGHTED VALUE
		No maturity [1]	< 6 months	6 months to < 1 yr	≥ 1yr	
23	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	2,624	1,636	68,125	48,348
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	-	5,450	9,261	18,233	22,854
25	Assets with matching interdependent liabilities	**-**	**974**	**-**	**-**	**-**
26	Other assets:	**16,092**		**18,988**		**23,960**
27	Physical trade commodities, including gold	14	-	-	-	12
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	-		319		271
29	NSFR derivative assets	-		8,162		5,001
30	NSFR derivative liabilities before deduction of variation margin posted	-		7,879		-
31	All other assets not included in the above categories	16,078	33	1	2,594	18,676
32	Off-balance sheet items	-		**297,849**		**2,148**
33	**Total RSF**					**304,180**
34	**Net Stable Funding Ratio (%)**					**109**

[1] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

1.1 NSFR Disclosure Template (continued)

$m		30 Sep 2018				
		Unweighted value by residual maturity				WEIGHTED VALUE
		No maturity [1]	< 6 months	6 months to < 1 yr	≥ 1yr	
ASF Item						
1	Capital:	**54,902**	**-**	**-**	**273**	**55,176**
2	Regulatory capital	53,486	-	-	-	53,486
3	Other capital instruments	1,416	-	-	273	1,690
4	Retail deposits and deposits from small business customers:	**160,464**	**45,808**	**2,419**	**790**	**191,298**
5	Stable deposits	51,616	2,048	62	94	51,134
6	Less stable deposits	108,848	43,760	2,357	696	140,164
7	Wholesale funding:	**75,904**	**140,147**	**9,831**	**12,567**	**77,698**
8	Operational deposits	23,705	-	-	-	11,852
9	Other wholesale funding	52,199	140,147	9,831	12,567	65,846
10	Liabilities with matching interdependent assets	**-**	**-**	**-**	**-**	**-**
11	Other liabilities:	**15,885**		**6,184**		**2,243**
12	NSFR derivative liabilities			3,980		
13	All other liabilities and equity not included in the above categories	15,885	23	-	2,181	2,243
14	Total ASF					326,415
RSF Item						
15	Total NSFR high-quality liquid assets (HQLA)					**12,947**
16	Deposits held at other financial institutions for operational purposes	**509**	**-**	**-**	**-**	**254**
17	Performing loans and securities:	**10,984**	**133,035**	**27,765**	**234,988**	**258,713**
18	Performing loans to financial institutions secured by Level 1 HQLA	-	3,450	-	-	573
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	3,822	27,724	6,226	6,664	14,800
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	7,162	91,060	14,606	143,042	174,045
21	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	23,412	1,756	3,183	14,916
22	Performing residential mortgages, of which:	-	2,678	1,625	69,029	48,516

[1] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

1.1 NSFR Disclosure Template (continued)

$m		30 Sep 2018				
		Unweighted value by residual maturity				WEIGHTED VALUE
		No maturity [(1)]	< 6 months	6 months to < 1 yr	≥ 1yr	
23	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	2,639	1,592	67,630	47,291
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	-	8,123	5,308	16,253	20,779
25	Assets with matching interdependent liabilities	-	-	-	-	-
26	Other assets:	**16,444**	**21,229**			**24,771**
27	Physical trade commodities, including gold	13	-	-	-	11
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	-	346			294
29	NSFR derivative assets	-	9,151			5,171
30	NSFR derivative liabilities before deduction of variation margin posted	-	8,752			-
31	All other assets not included in the above categories	16,431	120	2	2,858	19,295
32	Off-balance sheet items	-	**295,020**			**2,295**
33	**Total RSF**					**298,980**
34	**Net Stable Funding Ratio (%)**					**109**

[(1)] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

PART D : ATTESTATION

The Pillar 3 disclosures as at 31 December 2018 have been prepared in accordance with the internal controls processes approved by the DBSH Board of Directors.

Piyush Gupta
Chief Executive Officer

15 February 2019
Singapore

PART E: ABBREVIATIONS

Abbreviations	Brief Description
A-IRBA	Advanced Internal Ratings-Based Approach
ASF	Available Stable Funding
AT1	Additional Tier 1
BCP	Business Continuity Plan
BRMC	Board Risk Management Committee
CAR	Capital Adequacy Ratio
CCF	Credit Conversion Factor
CCO	Chief Credit Officer
CCP	Central Counterparty
CCR	Counterparty Credit Risk
CDS	Credit Default Swaps
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CF	Commodities Finance
CISO	Chief Information Security Officer
CRE	Commercial Real Estate
CRM	Credit Risk Mitigation
CRO	Chief Risk Officer
CVA	Credit Valuation Adjustment
D-SIB	Domestic Systemically Important Banks
DOA	Delegation of Authority
EAD	Exposure at the time of default
EC	Economic Capital
EL	Expected Loss
EPE	Expected Positive Exposure
ES	Expected Shortfall

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
F-IRBA	Foundation Internal Ratings-Based Approach
FC(CA)	Financial Collateral Comprehensive Approach
FC(SA)	Financial Collateral Simple Approach
G-SIB	Global Systemically Important Banks
GCPC	Group Credit Policy Committee
GCRC	Group Credit Risk Committee
GCRMC	Group Credit Risk Models Committee
GMLRC	Group Market and Liquidity Risk Committee
GORC	Group Operational Risk Committee
GSSTC	Group Scenario and Stress Testing Committee
HQLA	High Quality Liquid Assets
HVCRE	High-volatility Commercial Real Estate
IAA	Internal Assessment Approach
ICAAP	Internal Capital Adequacy Assessment Process
IMA	Internal Models Approach
IMM	Internal Models Method
IPRE	Income-producing Real Estate
IPV	Independent Price Verification
IRBA	Internal Ratings-Based Approach
ISDA	International Swaps & Derivatives Association
ISIN	International Securities Identification Number
IT	Information Technology
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
MAS	Monetary Authority of Singapore
MDB	Multilateral Development Bank

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
NPA	Non-performing Assets
NSFR	Net Stable Funding Ratio
OF	Object Finance
ORM	Operational Risk Management
OTC	Over-the-counter
PAC	Product Approval Committee
PD	Probability of Default
PE/VC	Private Equity and Venture Capital
PF	Project Finance
PSE	Public Sector Entity
PVA	Prudent Valuation Adjustments
QRRE	Qualifying Revolving Retail Exposures
Repo	Repurchase agreements
Risk ExCo	Risk Executive Committee
RMG	Risk Management Group
RSF	Required Stable Funding
RW	Risk Weight
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
SA(OR)	Standardised Approach to Operational Risk
SEC-ERBA	Securitisation External Ratings-Based Approach
SEC-IRBA	Securitisation Internal Ratings-Based Approach
SEC-SA	Securitisation Standardised Approach

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
SFT	Securities or Commodities Financing Transaction
SGD	Singapore Dollar
SME	Small Medium Enterprise
SWWR	Specific Wrong-way Risk
TEP	Total Eligible Provisions
TMRAC	Target Market and Risk Acceptance Criteria
T1	Tier 1
T2	Tier 2
USD	United States Dollar
VaR	Value-at-risk
α	Alpha Factor