2019
HSBC Bank Canada
Regulatory Capital & Risk Management

Pillar 3 Supplementary Disclosures
As at December 31, 2019

HSBC

Contents

Notes to users

Regulatory Capital and Risk Management Pillar 3 Disclosures

The Office of the Superintendent of Financial Institutions ("OSFI") supervises HSBC Bank Canada (the "Bank") on a consolidated basis. OSFI has approved the Bank's application to apply the Advanced Internal Ratings Based ("AIRB") approach to credit risk on our portfolio and the Standardized Approach for measuring Operational Risk. Please refer to the Annual Report and Accounts 2019 for further information on the Bank's risk and capital management framework. Further information regarding HSBC Group Risk Management Processes can be found in HSBC Holdings plc Capital and Risk Management Pillar 3 Disclosures available on HSBC Group's investor relations web site.

The Pillar 3 Supplemental Disclosures are additional summary descriptions and quantitative financial information which supplement those already made in the Annual Report and Accounts 2019 for the disclosure requirements under OSFI's Pillar 3 Disclosure Requirements Advisory issued September 29, 2006 consistent with the "International Convergence of Capital Measurement and Capital Standards" ('Basel II') issued by the Basel Committee on Banking Supervision (BCBS) in June 2006 and the "Composition of capital disclosure requirements" ('Basel III') issued by the BCBS in June 2012 under OSFI's advisory letter requirements issued in July 2013 and revised in May 2018

The Basel rules are structured around three "pillars":

- Pillar 1 - defines the Minimum capital requirements,
- Pillar 2 - requires banks to have robust Internal Capital Adequacy Assessment Processes (ICAAP) which will be part of regulators' Supervisory review
- Pillar 3 - defines the Market discipline/ disclosures required by Banks which should be consistent and comparable across Banks.

Pillar 3 complements the other two pillars of Basel framework i.e. minimum capital requirements and the supervisory review process. Its aim is to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess certain specified information on the scope of application of Basel 2/2.5 ('the Basel rules'), capital, particular risk exposures, risk assessment processes, and hence the capital adequacy of the institution.

The supervisory objectives of BCBS are to promote safety and soundness in the financial system and maintain an appropriate level of capital in the system, enhance competitive equality, constitute a more comprehensive approach to addressing risks, and focus on internationally active banks.

On June 26, 2012, the BCBS issued the Basel III rules on the information banks must publicly disclose when detailing the composition of their capital, which set out a framework to ensure that the components of banks capital bases are publicly disclosed in standardised formats across and within jurisdictions for banks subject to Basel III.

Basel III builds on Basel II. It also increases the level of risk-weighted assets for significant investments and deferred tax amounts due to temporary timing differences under defined thresholds, exposures to large or unregulated financial institutions meeting specific criteria, exposures to centralized counterparties and exposures that give rise to wrong way risk. In addition Basel III places a greater emphasis on common equity by introducing a new category of capital, Common Equity Tier 1 (CET1), which consists primarily of common shareholders equity net of regulatory adjustments. These regulatory adjustments include goodwill, intangible assets, deferred tax assets, pension assets and investments in financial institutions over certain thresholds. Overall, the Basel III rules increase the level of regulatory deductions relative to Basel II.

On 12 January 2018, OSFI announced its decision to update the existing capital floor for institutions using advanced approaches for credit risk and operational risk. The capital floor of 90%, based on the Basel I capital accord was replaced by a more risk-sensitive capital floor based on the standardized approach under Basel II framework, with floor factor set at 75%.

From Q1 2019, disclosure is based on OSFI's Pillar 3 disclosure requirements (April 2017), including Capital disclosure requirement and Leverage ratio disclosure requirement.

This report is unaudited and all amounts are in rounded millions of Canadian dollars, unless otherwise indicated. Balances reported in this Pillar 3 document reflect the OSFI Capital Adequacy Requirements (CAR) guidelines.

Starting 1 January 2019, counterparty credit risk exposures arising from derivatives are calculated under Standardized Approach for Counterparty Credit Risk (SA-CCR), a new BCBS approach adopted by OSFI. Capital requirements for exposures to Central Counterparties (CCPs) have also been revised. The impact of these changes on credit risk RWA, Credit Valuation Adjustment (CVA) RWA and Leverage Ratio is immaterial.

Road map to Pillar 3 disclosure requirement

Section	Identifier	Table and templates	Frequency	2019 Annual Report
Capital disclosure	CC1	Composition of Regulatory Capital	Quarterly	
Overview of risk management	OVA	Bank risk management approach	Annually	27-31
	OV1	Overview of RWA	Quarterly	
Linkages between financial statements and regulatory exposures	LI1	Differences between accounting and regulatory scopes of consolidation and mapping of financial statements with regulatory risk categories	na[1]	
	LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements		
	LIA	Explanations of differences between accounting and regulatory exposure amounts		
Credit risk	CRA	General information about credit risk	Annually	31-32
	CR1	Credit quality of assets	Semi-annually	34
	CR2	Changes in stock of defaulted loans and debt securities	na[1]	
	CRB	Additional disclosure related to the credit quality of assets	Annually	
	CRC	CRC – Qualitative disclosure requirements related to credit risk mitigation techniques	Annually	44
	CR3	Credit risk mitigation techniques – overview	Semi-annually	
	CRD	Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	na[1]	
	CR4	Standardized approach – credit risk exposure and Credit Risk Mitigation (CRM) effects	Semi-annually	
	CR5	Standardized approach – exposures by asset classes and risk weights	Semi-annually	
	CRE	Qualitative disclosures related to IRB models	na[1]	
	CR6	IRB Credit risk exposures by portfolio and PD range	Semi-annually	
	CR7	IRB – Effect on RWA of credit derivatives used as CRM techniques	na[2]	
	CR8	RWA flow statements of credit risk exposures under IRB	Quarterly	
	CR9	IRB – Backtesting of probability of default (PD) per portfolio	na[1]	
	CR10	IRB (specialized lending and equities under the simple risk weight method)	Semi-annually	
Counterparty credit risk	CCRA	Qualitative disclosure related to counterparty credit risk	Annually	68-69
	CCR1	Analysis of counterparty credit risk (CCR) exposure by approach	Semi-annually	
	CCR2	Credit valuation adjustment (CVA) capital charge	Semi-annually	
	CCR3	Standardized approach of CCR exposures by regulatory portfolio and risk weights	na[2]	
	CCR4	IRB – CCR exposures by portfolio and PD scale	Semi-annually	
	CCR5	Composition of collateral for CCR exposure	na[1]	
	CCR6	Credit derivatives exposures	Semi-annually	
	CCR7	RWA flow statements of CCR exposures under the Internal Model Method (IMM)	na[2]	
	CCR8	Exposures to central counterparties	Semi-annually	
Securitization	SECA	Qualitative disclosure requirements related to securitization exposures	na[2]	
	SEC1	Securitization exposures in the banking book		
	SEC2	Securitization exposures in the trading book		
	SEC3	Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor		
	SEC4	Securitization exposures in the banking book and associated capital requirements – bank acting as investor		
Market risk	MRA	Qualitative disclosure requirements related to market risk	Annually	
	MRB	Qualitative disclosures for banks using the Internal Models Approach (IMA)	Annually	
	MR1	Market risk under standardised approach	Semi-annually	
	MR2	RWA flow statements of market risk exposures under an IMA	Quarterly	
	MR3	IMA values for trading portfolios	Semi-annually	
	MR4	Comparison of VaR estimates with gains/losses	Semi-annually	
Leverage Ratio	LR2	Leverage Ratio Common Disclosure Template	Quarterly	

1. *non D-SIBs are permitted to adopt and disclose any of the above listed tables that are relevant in reflecting the risks and activities of the institution. We assessed accordingly and decided not to adopt this particular table*
2. *table does not have any reportable values as at 31st December 2019*

Table 1 : Composition of Regulatory Capital (CC1)

		All-in Basis [1]	
		At	
		31 Dec 2019	30 Sep 2019
	Common Equity Tier 1 capital: instruments and reserves ($m)		
1	Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	**1,225**	1,225
2	Retained earnings	**3,745**	3,733
3	Accumulated other comprehensive income (and other reserves)	**39**	41
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)	**—**	—
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**—**	—
6	Common Equity Tier 1 capital before regulatory adjustments	**5,009**	4,999
	Common Equity Tier 1 capital: regulatory adjustments ($m)		
28	Total regulatory adjustments to Common Equity Tier 1	**(246)**	(283)
29	Common Equity Tier 1 capital (CET1)	**4,763**	4,716
	Additional Tier 1 capital: instruments		
30	Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	**1,100**	1,100
31	– of which: classified as equity under applicable accounting standards	**1,100**	1,100
32	– of which: classified as liabilities under applicable accounting standards	**—**	—
33	Directly issued capital instruments subject to phase out from Additional Tier 1	**—**	—
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount	**—**	—
35	*of which: instruments issued by subsidiaries subject to phase out*	**.**	—
36	Additional Tier 1 capital before regulatory adjustments	**1,100**	1,100
	Additional Tier 1 capital: regulatory adjustments ($m)		
43	Total regulatory adjustments to Additional Tier 1 capital	**—**	—
44	Additional Tier 1 capital (AT1)	**1,100**	1,100
45	Tier 1 capital (T1 = CET1 + AT1)	**5,863**	5,816
	Tier 2 capital: instruments and allowances ($m)		
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	**1,000**	1,000
47	Directly issued capital instruments subject to phase out from Tier 2	**34**	39
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties		—
49	– of which: instruments issued by subsidiaries subject to phase out		—
50	Impairment allowances	**3**	6
51	Tier 2 capital before regulatory adjustments	**1,037**	1,045
	Tier 2 capital: regulatory adjustments ($m)		
57	Total regulatory adjustments to Tier 2 capital	**—**	—
58	Tier 2 capital (T2)	**1,037**	1,045
59	Total capital (TC = T1 + T2)	**6,900**	6,861
60	Total risk-weighted assets (RWA)	**42,080**	42,116
	Capital ratios (%)	**All-in Basis [1]**	
61	**Common Equity Tier 1 (as percentage of risk-weighted assets)**	**11.3**	11.2
62	**Tier 1 (as percentage of risk-weighted assets)**	**13.9**	13.8
63	**Total capital (as percentage of risk-weighted assets)**	**16.4**	16.3
	OSFI all-in target (%)		
69	Common Equity Tier 1 capital all-in target ratio	**7.0**	7
70	Tier 1 capital all-in target ratio	**8.5**	8.5
71	Total capital all-in target ratio	**10.5**	10.5
	Current cap on CET1 instruments subject to phase out arrangements (%)		
80	Current cap on CET1 instruments subject to phase out arrangements	**30**	30
81	Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)	**na**	na
82	Current cap on AT1 instruments subject to phase out arrangements	**30**	30
83	Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)	—	—
84	Current cap on T2 instruments subject to phase out arrangements	**30**	30
85	Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)	—	—

1. *"All-in" regulatory capital assumes that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022*
2. *For year 2019, OSFI has allowed a 0.7 scalar to be applied to the exposure amount determined under SA-CCR for the purpose of calculating CVA.*

Table 2 : Overview of Risk Weighted Assets (OV1)

		At		
		31 Dec 2019	**30 Sep 2019**	**31 Dec 2019**
		RWA[1]	RWA	**Capital requirements**[2]
		$m	$m	**$m**
1	Credit risk (excluding counterparty credit risk)	**33,082**	34,668	**2,647**
2	– of which Standardized approach (SA) [3]	**1,661**	3,005	**133**
3	– of which internal rating based (IRB) approach	**31,421**	31,663	**2,514**
4	Counterparty credit risk	**1,753**	2,001	**140**
4a	– of which credit valuation adjustment (CVA)[4]	**547**	688	**44**
5	– of which Standardized approach for counterparty credit risk (SA-CCR)[5]	**1,206**	1,313	**96**
6	– of which internal model method (IMM)	**—**	—	**—**
7	Equity positions in banking book[6]	**5**	6	**—**
8	Equity investments in funds – look-through approach	**—**	—	**—**
9	Equity investments in funds – mandate-based approach	**—**	—	**—**
10	Equity investments in funds – fall-back approach	**—**	—	**—**
11	Settlement risk	**—**	—	**—**
12	Securitisation exposures in banking book	**—**	—	**—**
13	– of which IRB ratings based approach (RBA)	**—**	—	**—**
14	– of which IRB supervisory formula approach (SFA)	**—**	—	**—**
15	– of which SA/ simplified supervisory formula approach (SSFA)	**—**	—	**—**
16	Market risk	**761**	812	**61**
17	– of which Standardized approach (SA)	**160**	199	**13**
18	– of which internal model method (IMM)	**601**	613	**48**
19	Operational risk	**3,850**	3,841	**308**
20	– of which Basic indicator approach	**—**	—	**—**
21	– of which Standardized approach	**3,850**	3,841	**308**
22	– of which Advanced measurement approach	**—**	—	**—**
23	Amounts below the thresholds for deduction (subject to 250% risk weight)			**—**
24	Floor adjustment[7]	**2,629**	788	**210**
25	**Total (1+4+7+8+9+10+11+12+16+19+23+24)**	**42,080**	42,116	**3,366**

1. *RWA includes 6% adjustment to IRB risk-weighted assets for scaling factor*
2. *'Capital requirement' represents the minimum total capital charge set at 8% of RWAs by the OSFI Capital Adequacy Requirements (CAR) guidelines.*
3. *Amount includes Other assets not included in standardized or IRB approaches*
4. *For year 2019, OSFI has allowed a 0.7 scalar to be applied to the exposure amount determined under SA-CCR for the purpose of calculating CVA.*
5. *Starting Q1,2019 counterparty credit risk exposures arising from derivatives are calculated under SA-CCR which were earlier [Till Dec 2018] calculated under Current Exposure Method(CEM)*
6. *Amount includes banking book equity exposure which are not material and risk weighted @100% in accordance with OSFI CAR guidelines*
7. *The Bank is subject to a regulatory capital floor prescribed by OSFI.*

Credit Risk

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under contract. Credit risk arises principally from direct lending, trade finance and the leasing business, but also from other products such as guarantees and credit derivatives.

Table 3 : Credit quality of assets (CR1)

		a	b	c	d
		Gross carrying values of			
		Defaulted exposures	**Non - defaulted exposures**	**Allowances/ impairments**	**Net values (a+b-c)**
		$m	**$m**	**$m**	**$m**
1	Debt securities	**—**	**23,689**	**1**	**23,688**
2	Loans	**334**	**66,448**	**272**	**66,510**
3	Off-balance sheet exposures	**89**	**48,086**	**27**	**48,148**
4	**Total at 31 Dec 2019**	**423**	**138,223**	**300**	**138,346**
1	Debt securities	—	24,113	1	24,112
2	Loans	251	63,032	231	63,053
3	Off-balance sheet exposures	66	48,847	36	48,875
4	Total at 31 Dec 2018	316	135,992	268	136,040

Table 4 : Credit risk mitigation techniques – overview (CR3)

		Exposures unsecured: carrying amount	Exposures secured: carrying amount [2]	Exposures secured by collateral	Exposures secured by guarantees / credit derivatives
		$m	**$m**	**$m**	**$m**
1	Loans	**8,712**	**58,070**	**57,358**	**712**
2	Debt securities	**12,221**	**11,468**	**11,468**	**—**
3	**Total at 31 Dec 2019[1]**	**20,933**	**69,538**	**68,826**	**712**
4	Of which defaulted	**82**	**252**	**251**	**1**
1	Loans	9,487	53,795	53,037	758
2	Debt securities	14,320	9,793	9,793	—
3	Total at 31 Dec 2018[1]	23,807	63,588	62,830	758
4	Of which defaulted	104	146	144	2

1. *Amount equals to the carrying value gross of allowances.*
2. *Amount represents the gross carrying value of the exposure secured (fully or partially by either collateral or guarantees)*

Table 5 : Concentration of exposures by industry or counterparty types (CRB-A)

	31 Dec 2019			31 Dec 2018		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Corporate	**74,033**	**52,077**	**27,661**	72,288	49,900	27,794
– Agriculture	**2,347**	**1,745**	**864**	1,861	1,237	749
– Automotive	**2,498**	**1,961**	**1,096**	2,561	1,940	1,146
– Business Service Industry	**2,862**	**2,255**	**1,106**	2,213	1,703	873
– Construction related industry	**4,798**	**2,919**	**1,825**	4,703	2,808	1,535
– Energy	**8,900**	**5,620**	**3,403**	9,575	5,977	3,880
– Finance & Insurance industry	**4,350**	**2,511**	**1,215**	4,317	2,567	1,217
– Hotel & Accommodation	**1,815**	**1,608**	**737**	1,281	1,068	495
– Individuals	**200**	**155**	**105**	582	504	485
– Manufacturing	**10,883**	**7,538**	**4,709**	10,610	7,021	4,298
– Mining, Logging And Forestry	**2,608**	**1,617**	**1,133**	2,827	1,676	1,171
– Other Service	**4,132**	**3,206**	**1,542**	4,614	3,334	1,829
– Real Estate	**16,404**	**12,269**	**5,178**	14,779	11,477	5,138
– Retail Trade	**1,881**	**1,368**	**721**	2,589	1,641	813
– Transportation And Storage	**4,200**	**3,125**	**1,727**	3,779	2,892	2,035
– Wholesale trade	**6,155**	**4,180**	**2,300**	5,997	4,055	2,130
Sovereign	**21,836**	**20,991**	**493**	22,590	21,741	619
Bank	**5,567**	**5,298**	**381**	6,466	6,146	565
Total Corporate, Sovereign and Bank	**101,436**	**78,366**	**28,535**	101,344	77,787	28,978
Residential Mortgages	**26,277**	**26,278**	**2,027**	24,177	24,175	1,951
HELOC's	**5,442**	**2,770**	**535**	5,332	2,800	568
Other Retail (excluding QRR and SME)	**4,033**	**1,399**	**552**	4,041	1,651	630
Qualifying Revolving Retail (QRR)	**1,069**	**397**	**152**	1,048	401	154
Retail SME	**389**	**388**	**275**	344	343	236
Total Retail	**37,210**	**31,232**	**3,541**	34,942	29,370	3,539
Total Gross Credit Exposure[1]	**138,646**	**109,598**	**32,076**	136,286	107,157	32,517

Table 6 : Residual maturity breakdown of exposures (CRB-B)

	31 Dec 2019			31 Dec 2018		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Within 1 year	**49,608**	**36,890**	**12,257**	48,916	35,280	12,634
1-5 years	**73,378**	**61,201**	**17,257**	70,863	59,331	16,865
Greater than 5 years	**15,660**	**11,507**	**2,562**	16,507	12,546	3,018
No specific maturity	**—**	**—**	**—**	—		
Total Gross Credit Exposure[1]	**138,646**	**109,598**	**32,076**	136,286	107,157	32,517

Table 7 : Geographical breakdown[2] of exposures (CRB-C)

	31 Dec 2019			31 Dec 2018		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Canada	**123,419**	**97,158**	**29,238**	122,267	95,883	29,120
United States of America	**6,005**	**4,570**	**1,518**	6,568	4,967	1,957
United Kingdom	**446**	**326**	**143**	385	269	128
Other countries	**8,776**	**7,544**	**1,177**	7,066	6,038	1,312
Total Gross Credit Exposure[1]	**138,646**	**109,598**	**32,076**	136,286	107,157	32,517

1. *Gross carrying value of the exposure and excludes 'Other Assets.*
2. *Amounts shown by geographical region and country in this table are based on the country of residence of the counterparty.*

Table 8 : Standardized approach – credit conversion factor ('CCF') and credit risk mitigation ('CRM') effects (CR4)

		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
		$m	$m	$m	$m	$m	%
	Asset classes						
1	Sovereigns and their central banks	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporates	**420**	**550**	**420**	**—**	**351**	**84**
7	Regulatory Retail Portfolios	**407**	**2,168**	**405**	**—**	**305**	**75**
10	Equity	**—**	**—**	**—**	**—**	**—**	**—**
13	Other assets[2]	**1,837**	**—**	**1,837**	**—**	**1,005**	**55**
14	**Total at 31 Dec 2019**	**2,664**	**2,718**	**2,662**	**—**	**1,661**	**62**
1	Sovereigns and their central banks	—	—	—	—	—	—
6	Corporates	896	429	896	—	896	100
7	Regulatory Retail Portfolios	439	1,977	436	—	328	75
10	Equity	—	—	—	—	—	—
13	Other assets[2]	1,632	—	1,632	—	945	58
14	Total at 31 Dec 2018	2,967	2,406	2,964	—	2,169	73

1. *CCF - Credit Conversion Factor, CRM - Credit Risk Mitigation.*
2. *Comprises exposures subject to credit risk framework but are not included in standardized or IRB approaches including settlement risk and other balance sheet assets that are risk-weighted at 100%.*

Table 9: Standardized approach – exposures by asset class and risk weight (CR5)

	Risk weight ('RW')	0%	20%	50%	75%	100%	150%	250%	Total credit exposure amount (post-CCF and post-CRM)
		$m	$m	$m	$m	$m	$m	$m	$m
	Asset classes								
1	Sovereigns and their central banks	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporates	**—**	**87**	**—**	**—**	**333**	**—**	**—**	**420**
7	Regulatory Retail Portfolios	**—**	**—**	**—**	**403**	**2**	**—**	**—**	**405**
10	Equity	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
13	Other assets	**764**	**201**	**—**	**—**	**810**	**—**	**62**	**1,837**
14	**Total at 31 Dec 2019**	**764**	**288**	**—**	**403**	**1,145**	**—**	**62**	**2,662**
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—
6	Corporates	—	—	—	—	896	—	—	896
7	Regulatory Retail Portfolios	—	—	—	433	3	—	—	436
10	Equity	—	—	—	—	—	—	—	—
13	Other assets	665	168	—	—	725	—	74	1,632
14	Total at 31 Dec 2018	665	168	—	433	1,624	—	74	2,964

Table 10: IRB – Credit risk exposures by portfolio and PD range (CR6)

PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposure pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	Expected loss	Provisions
	$m	$m	%	$m	%		%	years	$m	%	$m	$m
Sovereign												
0.00 to <0.15	20,401	1,427	41	20,987	0.02	86	8.3	3.31	491	2.3	0.3	0.8
0.15 to <0.25	–	5	41	2	0.22	5	48.7	1.00	1	29.2	–	–
0.25 to <0.50	–	–	–	–	–	–	–	–	–	–	–	–
0.50 to <0.75	1	–	41	1	0.63	5	40.3	2.57	1	72.5	–	–
0.75 to <2.50	–	2	47	1	1.12	4	26.3	0.82	–	29.1	–	–
2.50 to <10.00	–	–	–	–	–	–	–	–	–	–	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	20,402	1,434	43	20,991	0.02	100	8.3	3.31	493	2.3	0.3	0.8
Banks												
0.00 to <0.15	4,466	1,086	76	5,287	0.05	168	17.7	1.48	375	7.1	0.6	0.1
0.15 to <0.25	4	1	20	4	0.22	12	34.2	0.10	1	24.6	–	–
0.25 to <0.50	3	–	20	3	0.37	3	35.0	0.27	1	39.2	–	–
0.50 to <0.75	–	3	20	1	0.63	3	35.0	0.11	–	51.5	–	–
0.75 to <2.50	1	2	20	2	1.00	8	49.0	0.19	2	91.3	–	–
2.50 to <10.00	1	–	–	1	5.75	1	55.8	2.50	2	246.4	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	4,475	1,092	76	5,298	0.10	195	17.7	1.48	381	7.2	0.6	0.1
Corporate – SME												
0.00 to <0.15	170	388	41	331	0.10	110	37.3	1.77	58	17.5	0.1	0.1
0.15 to <0.25	1,318	964	42	1,719	0.22	742	30.8	1.86	433	25.2	1.2	0.4
0.25 to <0.50	1,475	1,004	41	1,888	0.37	814	31.3	1.94	653	34.6	2.2	1.2
0.50 to <0.75	1,962	1,572	43	2,630	0.63	739	31.1	1.87	1,175	44.7	5.1	2.3
0.75 to <2.50	4,141	2,261	44	5,124	1.21	1,663	31.2	1.79	2,837	55.4	19.4	6.9
2.50 to <10.00	1,028	510	42	1,242	4.59	524	30.0	1.62	988	79.5	17.0	9.0
10.00 to <100.00	266	129	42	321	20.33	130	29.7	1.64	363	113.1	19.8	11.7
100.00 (Default)	149	21	42	158	100.00	68	54.5	1.19	199	126.2	92.8	92.7
Sub-total	10,509	6,849	42	13,413	2.80	4,790	31.4	1.81	6,706	50.0	157.6	124.3
Corporate – Other												
0.00 to <0.15	3,614	10,221	43	7,999	0.08	433	46.1	1.98	1,903	23.8	2.9	1.6
0.15 to <0.25	3,651	4,165	44	5,488	0.22	473	36.7	1.98	2,019	36.8	4.4	2.0
0.25 to <0.50	5,020	4,912	43	7,136	0.37	489	36.1	1.92	3,311	46.4	9.5	6.7
0.50 to <0.75	5,003	3,833	43	6,645	0.63	465	34.5	1.82	3,812	57.4	14.4	7.1
0.75 to <2.50	5,965	4,968	42	8,067	1.22	1,233	36.0	1.93	6,211	77.0	35.3	23.4
2.50 to <10.00	1,108	1,819	42	1,880	4.67	245	34.6	1.51	2,047	108.9	30.0	13.5
10.00 to <100.00	415	324	42	551	13.36	67	33.0	1.34	801	145.4	25.0	23.1
100.00 (Default)	124	56	46	150	100.00	22	33.5	1.35	209	139.3	38.5	34.0
Sub-total	24,900	30,298	43	37,916	1.30	3,427	37.9	1.89	20,313	53.6	160.0	111.4
Wholesale AIRB - Total at 31 Dec 2019	60,286	39,673	44	77,618	1.13	8,512	27.4	2.23	27,893	35.9	318.5	236.6

Table 10: IRB – Credit risk exposures by portfolio and PD range (CR6) (continued)

PD scale	Original on-balance sheet gross exposure $m	Off-balance sheet exposure 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 %	Expected loss $m	Provisions $m
Retail Residential Mortgages												
0.00 to <0.15	**16,846**	**1**	**—**	**16,847**	**0.06**	**39,895**	**17.7**	**—**	**507**	**3.0**	**1.8**	**3.0**
0.15 to <0.25	**5,193**	**—**	**—**	**5,194**	**0.19**	**9,928**	**18.3**	**—**	**389**	**7.5**	**1.8**	**1.2**
0.25 to <0.50	**1,783**	**—**	**—**	**1,783**	**0.32**	**3,622**	**16.8**	**—**	**179**	**10.1**	**1.0**	**1.3**
0.50 to <0.75	**1,073**	**—**	**—**	**1,073**	**0.57**	**1,994**	**18.1**	**—**	**176**	**16.4**	**1.1**	**0.4**
0.75 to <2.50	**911**	**—**	**—**	**911**	**1.98**	**2,073**	**17.3**	**—**	**324**	**35.5**	**3.1**	**0.8**
2.50 to <10.00	**267**	**—**	**—**	**267**	**5.29**	**692**	**17.3**	**—**	**166**	**62.1**	**2.4**	**0.5**
10.00 to <100.00	**158**	**—**	**—**	**158**	**25.66**	**388**	**16.7**	**—**	**162**	**103.0**	**6.7**	**8.0**
100.00 (Default)	**45**	**—**	**—**	**45**	**100.00**	**143**	**20.8**	**—**	**124**	**273.9**	**0.1**	**8.4**
Sub-total	**26,276**	**1**	**—**	**26,278**	**0.60**	**58,735**	**17.8**	**—**	**2,027**	**7.7**	**18.0**	**23.6**
HELOC												
0.00 to <0.15	**6**	**—**	**—**	**6**	**0.06**	**35**	**18.0**	**—**	**—**	**3.1**	**—**	**—**
0.15 to <0.25	**4**	**—**	**—**	**4**	**0.19**	**19**	**18.1**	**—**	**—**	**7.4**	**—**	**—**
0.25 to <0.50	**1,086**	**3,241**	**28**	**1,988**	**0.38**	**20,635**	**17.7**	**—**	**240**	**12.0**	**1.4**	**0.8**
0.50 to <0.75	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**		
0.75 to <2.50	**406**	**492**	**37**	**586**	**1.10**	**4,591**	**18.5**	**—**	**148**	**25.3**	**1.2**	**1.0**
2.50 to <10.00	**134**	**17**	**37**	**140**	**4.76**	**811**	**18.1**	**—**	**87**	**61.7**	**1.2**	**0.7**
10.00 to <100.00	**40**	**3**	**47**	**41**	**27.36**	**172**	**18.0**	**—**	**46**	**111.5**	**2.0**	**0.8**
100.00 (Default)	**5**	**8**	**—**	**5**	**100.00**	**85**	**19.6**	**—**	**14**	**257.4**	**—**	**0.4**
Sub-total	**1,681**	**3,761**	**30**	**2,770**	**1.40**	**26,348**	**17.9**	**—**	**535**	**19.3**	**5.8**	**3.7**
Retail Qualifying revolving exposures												
0.00 to <0.15	**65**	**667**	**20**	**200**	**0.31**	**40,153**	**57.2**	**—**	**19**	**9.4**	**0.3**	**0.6**
0.15 to <0.25	**70**	**146**	**28**	**112**	**1.16**	**15,739**	**69.4**	**—**	**35**	**31.6**	**0.9**	**1.7**
0.25 to <0.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.50 to <0.75	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.75 to <2.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
2.50 to <10.00	**55**	**46**	**39**	**73**	**4.29**	**6,311**	**72.1**	**—**	**61**	**83.6**	**2.3**	**5.9**
10.00 to <100.00	**8**	**8**	**33**	**10**	**23.61**	**886**	**69.9**	**—**	**21**	**197.7**	**1.7**	**1.8**
100.00 (Default)	**2**	**2**	**—**	**2**	**100.00**	**285**	**68.3**	**—**	**17**	**889.7**	**—**	**1.1**
Sub-total	**200**	**869**	**23**	**397**	**2.40**	**63,374**	**63.7**	**—**	**152**	**38.4**	**5.2**	**11.1**
Retail SME												
0.00 to <0.15	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.50 to <0.75	**21**	**128**	**100**	**148**	**0.71**	**1,292**	**45.6**	**—**	**61**	**41.3**	**0.5**	**—**
0.75 to <2.50	**150**	**39**	**99**	**190**	**2.19**	**1,193**	**57.9**	**—**	**153**	**80.6**	**2.4**	**0.8**
2.50 to <10.00	**17**	**22**	**97**	**38**	**7.53**	**750**	**40.0**	**—**	**25**	**66.4**	**1.1**	**0.7**
10.00 to <100.00	**7**	**2**	**99**	**9**	**23.37**	**331**	**48.2**	**—**	**11**	**118.5**	**1.0**	**0.2**
100.00 (Default)	**3**	**—**	**—**	**3**	**100.00**	**363**	**71.5**	**—**	**25**	**940.9**	**0.1**	**1.5**
Sub-total	**198**	**191**	**100**	**388**	**3.30**	**3,929**	**51.3**	**—**	**275**	**70.9**	**5.1**	**3.2**
Retail Other												
0.00 to <0.15	**162**	**1**	**—**	**162**	**0.10**	**630**	**34.0**	**—**	**16**	**9.9**	**0.1**	**0.3**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**198**	**486**	**28**	**332**	**0.26**	**10,691**	**24.4**	**—**	**42**	**12.7**	**0.3**	**0.2**
0.50 to <0.75	**338**	**105**	**33**	**372**	**0.53**	**7,373**	**47.3**	**—**	**137**	**36.8**	**0.9**	**2.0**
0.75 to <2.50	**33**	**44**	**34**	**48**	**1.49**	**934**	**23.4**	**—**	**14**	**29.1**	**0.2**	**0.2**
2.50 to <10.00	**47**	**18**	**41**	**55**	**3.32**	**971**	**21.8**	**—**	**18**	**32.9**	**0.4**	**0.2**
10.00 to <100.00	**20**	**5**	**75**	**24**	**21.60**	**6,177**	**33.3**	**—**	**17**	**72.6**	**1.9**	**2.2**
100.00 (Default)	**1**	**—**	**—**	**1**	**100.00**	**2,732**	**32.5**	**—**	**3**	**398.5**	**0.4**	**0.1**
Sub-total	**799**	**659**	**31**	**994**	**1.20**	**29,508**	**34.6**	**—**	**247**	**24.9**	**4.2**	**5.2**
Total Retail at 31 Dec 2019	**29,154**	**5,481**	**30**	**30,827**	**0.72**	**181,894**	**19.3**	**—**	**3,236**	**11.1**	**38.3**	**46.8**

Table 10: IRB – Credit risk exposures by portfolio and PD range (CR6) (continued)

PD scale	Original on-balance sheet gross exposure $m	Off-balance sheet exposure pre-CCF $m	Average CCF %	EAD post-CRM and post-CCF $m	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWAs $m	RWA density %	Expected loss $m	Provisions $m
Sovereign												
0.00 to <0.15	21,095	1,490	43	21,739	0.02	101	9.0	3.49	618	2.8	0.4	0.7
0.15 to <0.25	—	4	41	2	0.20	3	47.0	0.98	1	35.1	—	—
0.25 to <0.50	—	—	—	—	—	—	—	—	—	—	—	—
0.50 to <0.75	—	—	—	—	—	—	—	—	—	—	—	—
0.75 to <2.50	—	—	—	—	—	—	—	—	—	—	—	—
2.50 to <10.00	—	—	—	—	—	—	—	—	—	—	—	—
10.00 to <100.00	—	—	—	—	—	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—	—	—	—		—
Sub-total	21,096	1,494	43	21,741	0.02	254	9.0	3.49	619	2.8	0.4	0.7
Banks												
0.00 to <0.15	5,145	1,306	76	6,133	0.10	314	19.6	1.59	560	9.1	0.7	0.1
0.15 to <0.25	7	2	20	7	0.20	30	31.4	0.13	2	22.2	—	—
0.25 to <0.50	2	—	—	2	0.40	9	35.0	0.08	1	37.0	—	—
0.50 to <0.75	2	—	20	2	0.60	11	42.5	0.14	1	62.8	—	—
0.75 to <2.50	1	—	—	1	1.20	14	35.0	0.22	1	58.2	—	—
2.50 to <10.00	—	1	20	—	3.10	2	54.8	0.12	—	157.2	—	—
10.00 to <100.00	—	—	—	—	—	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—	—	—	—	—	—
Sub-total	5,158	1,309	76	6,146	0.10	380	19.6	1.59	565	9.2	0.8	0.1
Corporate – SME												
0.00 to <0.15	146	324	45	291	0.10	114	31.0	1.44	48	16.6	0.1	—
0.15 to <0.25	1,003	984	43	1,426	0.20	824	31.2	2.01	375	26.3	1.0	0.5
0.25 to <0.50	1,374	1,283	41	1,905	0.40	826	32.2	2.04	689	36.2	2.3	0.8
0.50 to <0.75	1,790	1,818	43	2,563	0.60	776	31.1	1.84	1,128	44.0	5.0	1.6
0.75 to <2.50	3,890	2,240	41	4,814	1.20	1,773	30.6	1.81	2,641	54.9	18.4	7.0
2.50 to <10.00	985	384	42	1,145	4.50	612	31.6	1.99	957	83.6	16.2	6.5
10.00 to <100.00	291	120	42	341	20.70	171	30.6	1.48	398	116.7	21.5	11.8
100.00 (Default)	104	9	41	108	100.00	65	44.6	1.36	104	96.5	52.4	52.4
Sub-total	9,582	7,163	42	12,593	2.50	5,161	31.2	1.87	6,341	50.4	116.8	80.6
Corporate – Other												
0.00 to <0.15	1,793	8,164	44	5,352	0.10	353	45.7	1.96	1,302	24.3	2	0.6
0.15 to <0.25	3,675	6,834	43	6,583	0.20	433	38.9	1.99	2,622	39.8	5.6	2.3
0.25 to <0.50	5,106	5,325	43	7,397	0.40	565	35.3	1.80	3,298	44.6	9.7	4.3
0.50 to <0.75	4,561	3,652	43	6,135	0.60	492	37.4	2.28	4,081	66.5	14.4	5.8
0.75 to <2.50	5,756	5,252	43	8,004	1.20	1,291	35.2	1.88	5,935	74.2	33.6	17.6
2.50 to <10.00	1,311	1,414	43	1,915	4.50	414	33.6	1.66	2,053	107.2	29.3	15.2
10.00 to <100.00	445	274	43	562	15.50	68	34.6	1.71	875	155.6	30.2	37.3
100.00 (Default)	97	46	49	119	100.00	27	46.3	1.41	101	85.2	51.5	50.4
Sub-total	22,742	30,961	43	36,068	1.30	3,643	37.8	1.95	20,268	56.2	176.4	133.5
Wholesale AIRB - Total at 31 Dec 2018	58,577	40,927	44	76,548	1.00	9,438	27.0	2.10	27,793	36.3	294.4	213.7

PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposure pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	Expected loss	Provisions
	$m	$m	%	$m	%		%	years	$m	%	$m	$m
Retail Residential Mortgages												
0.00 to <0.15	14,910	1	—	14,910	0.10	36,069	17.7	—	448	3.0	1.6	0.8
0.15 to <0.25	5,272	—	—	5,272	0.20	9,853	18.4	—	398	7.5	1.8	0.2
0.25 to <0.50	1,491	—	—	1,491	0.30	3,422	16.4	—	147	9.8	0.8	—
0.50 to <0.75	1,044	1	—	1,044	0.60	1,977	18.3	—	174	16.6	1.1	—
0.75 to <2.50	975	—	—	975	2.00	2,122	17.7	—	351	36.0	3.4	0.3
2.50 to <10.00	264	—	—	264	5.30	700	17.0	—	161	60.9	2.4	0.3
10.00 to <100.00	186	—	—	186	25.70	470	17.0	—	195	104.6	8.1	2.7
100.00 (Default)	31	—	—	31	100.00	143	19.0	—	79	251.0		8.4
Sub-total	24,174	2	—	24,174	0.60	54,756	17.8	—	1,951	8.1	19.1	12.7
HELOC												
0.00 to <0.15	—	—	—	—	—	—	—	—	—	—	—	—
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	—
0.25 to <0.50	1,088	3,069	29	1,976	0.40	19,647	17.8	—	239	12.1	1.3	0.9
0.50 to <0.75	—	—	—	—	—	—	—	—	—	—	—	—
0.75 to <2.50	429	513	36	614	1.10	4,703	18.5	—	154	25.1	1.2	1.6
2.50 to <10.00	135	21	41	144	4.80	806	18.9	—	92	64.2	1.3	0.7
10.00 to <100.00	57	10	53	63	27.40	249	18.3	—	71	113.2	3.1	1
100.00 (Default)	4	6	—	4	100.00	54	25.1	—	12	331.0	—	0.2
Sub-total	1,714	3,619	30	2,800	1.50	25,459	18.0	—	568	20.3	7	4.4
Retail Qualifying revolving												
0.00 to <0.15	—	—	—	—	—	—	—	—	—	—	—	—
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	—
0.25 to <0.50	67	644	21	199	0.30	35,370	57.8	—	19	9.4	0.4	0.6
0.50 to <0.75	—	—	—	—	—	—	—	—	—	—	—	—
0.75 to <2.50	72	139	29	112	1.20	12,864	69.3	—	35	31.5	0.9	1.9
2.50 to <10.00	57	47	40	76	4.30	5,964	72.3	—	63	83.8	2.4	5.4
10.00 to <100.00	9	9	34	12	24.60	1,018	69.5	—	25	198.6	2.1	1.5
100.00 (Default)	1	2	—	1	100.00	217	69.7	—	12	909.3	—	0.7
Sub-total	206	842	23	401	2.40	55,433	64.1	—	154	38.4	5.8	10.2
Retail SME												
0.00 to <0.15	—	—	—	—	—	—	—	—	—	—	—	
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	
0.25 to <0.50	—	—	—	—	—	—	—	—	—	—	—	
0.50 to <0.75	29	130	100	159	0.70	1,359	46.7	—	67	41.9	0.5	0.1
0.75 to <2.50	81	36	100	116	2.20	891	54.1	—	88	75.5	1.4	0.4
2.50 to <10.00	19	34	100	53	7.50	828	36.7	—	32	60.7	1.5	0.6
10.00 to <100.00	7	4	95	11	24.00	337	45.1	—	12	111.7	1.2	0.4
100.00 (Default)	4	—	1	4	100.00	273	79.9	—	37	1,052.8	0.1	2.1
Sub-total	140	204	100	343	4.00	3,688	47.9	—	236	68.9	4.6	3.6
Retail Other												
0.00 to <0.15	287	5	—	287	0.10	1,080	29	—	24	8.3	0.1	0.3
0.15 to <0.25	—	—		—		—		—	—	—	—	—
0.25 to <0.50	202	448	28	328	0.30	10,376	24.5	—	42	12.7	0.2	0.2
0.50 to <0.75	429	108	37	469	0.50	7,656	44.3	—	162	34.6	1.1	1.7
0.75 to <2.50	34	39	34	47	1.50	1,011	23.9	—	14	29.7	0.2	0.1
2.50 to <10.00	49	17	40	56	3.30	1,173	22.1	—	19	33.4	0.4	0.3
10.00 to <100.00	19	6	81	24	17.60	6,255	32.2	—	16	66.9	1.3	0.7
100.00 (Default)	4	1	—	4	100.00	6,662	47.8	—	26	614.1	1.7	2.7
Sub-total	1,024	624	31	1,214	1.20	34,213	33.3	—	302	24.9	5.0	6.1
Total Retail at 31 Dec 2018	27,258	5,291	32	28,933	0.80	173,549	19.5	—	3,211	11.1	41.5	37

Table 11 : RWA flow statements of credit risk exposures under the IRB approach (CR8)

		RWA[2]	Capital requirements[3]
		$m	$m
1	**RWA at the beginning of the period - 1 Oct 2019**	**31,663**	**2,533**
2	Asset size[1]	488	39
3	Asset quality	(942)	(75)
4	Model updates	—	—
5	Methodology and policy	212	17
6	Acquisitions and disposals	—	—
7	Foreign exchange movements	—	—
8	Other	—	—
9	**RWA at the end of the period - 31 Dec 2019**	**31,421**	**2,514**

1. *Foreign exchange movements are embedded in the asset size*
2. *RWA includes 6% adjustment to IRB risk-weighted assets for scaling factor*
3. *'Capital requirement' represents the minimum total capital charge set at 8% of RWAs under the OSFI CAR guidelines*

Table 12: Specialized lending on slotting approach and Equities under simple risk-weight method (CR10)

		Specialized Lending - Other than HVCRE									
		On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount					RWA[3]	Expected loss
					PF[2]	OF	CF	IPRE	Total		
Regulatory categories[1]	Regulatory maturity	$m	$m	%	$m	$m	$m	$m	$m	$m	$m
Strong	Less than 2.5 years	**—**	**—**	**50**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	Equal to or more than 2.5 years	**108**	**294**	**70**	**228**	**—**	**—**	**—**	**228**	**160**	**1**
Good	Less than 2.5 years	**—**	**—**	**70**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	Equal to or more than 2.5 years	**—**	**—**	**90**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Satisfactory		**94**	**11**	**115**	**95**	**—**	**—**	**5**	**100**	**115**	**3**
Weak		**—**	**—**	**250**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Default		**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	Total at 31 Dec 2019	**202**	**305**		**323**	**—**	**—**	**5**	**328**	**275**	**4**
Strong	Less than 2.5 years	—	—	50	—	—	—	—	—	—	—
	Equal to or more than 2.5 years	151	280	70	260	—	—	5	266	186	1
Good	Less than 2.5 years	—	—	70	—	—	—	—	—	—	—
	Equal to or more than 2.5 years	—	—	90	—	—	—	—	—	—	—
Satisfactory		75	—	115	75	—	—	—	75	87	2
Weak		—	—	250	—	—	—	—	—	—	—
Default		—	—	—	—	—	—	—	—	—	—
	Total at 31 Dec 2018	226	280		336	—	—	5	341	273	3

1. *Regulatory categories are defined under paragraph 88 of OSFI CAR guidelines*
2. *'PF: Project finance, OF: Object finance, CF: Commodities finance & IPRE: Income producing real estate*
3. *RWAs are pre 6% adjustment to IRB risk-weighted assets for scaling factor*

Counterparty Credit Risk (CCR)

Counterparty credit risk ('CCR') arises for derivatives and SFTs. It is calculated in both trading and non-trading books, and is the risk that a counterparty may default before settlement of the transaction. CCR is generated primarily in our wholesale global businesses.

Table 13: Analysis of counterparty credit risk exposure by approach (excluding CVA Charge & centrally cleared exposures)- CCR1

		Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used for computing regulatory EAD (Multiplier)	EAD post CRM	post-CRM RWAs
		$m	$m	$m		$m	$m
1	SA-CCR (for derivatives)	**631**	**1,429**	**—**	**1.4**	**2,885**	**1,155**
2	Internal Model Method (for derivatives and SFTs)	**—**	**—**	**—**	**—**	**—**	**—**
3	Simple Approach for credit risk mitigation (for SFTs)	**—**	**—**	**—**	**—**	**—**	**—**
4	Comprehensive Approach for credit risk mitigation (for SFTs)	**—**	**—**	**—**	**—**	**165**	**34**
5	VaR for SFTs	**—**	**—**	**—**	**—**	**—**	**—**
6	**Total at 31 Dec 2019**	**631**	**1,429**	**—**	**1.4**	**3,050**	**1,189**
1	Current exposure Method (CEM)[1]	1,669	1,080	—	1.0	2,749	1,016
2	Internal Model Method (for derivatives and SFTs)	—	—	—	—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)	—	—	—	—	—	—
4	Comprehensive Approach for credit risk mitigation (for SFTs)	—	—	—	—	90	24
5	VaR for SFTs	—	—	—	—	—	—
6	Total at 31 Dec 2018	1,669	1,080	—	1.0	2,839	1,040

1. *Starting Q1'2019 counterparty credit risk exposures arising from derivatives are calculated under SA-CCR which were earlier calculated under Current Exposure Method(CEM) up to Dec 2018.*

Table 14: Credit valuation adjustment (CVA) capital charge (CCR2)

		At 31 Dec 2019		At 31 Dec 2018	
		EAD post-CRM	RWA	EAD post-CRM	RWA[1]
		$m	$m	$m	$m
1	Total portfolios subject to the Advanced CVA capital charge	—	—	—	—
2	– VaR component (including the 3 × multiplier)	—	—	—	—
3	– Stressed VaR component (including the 3 × multiplier)	—	—	—	—
4	All portfolios subject to the Standardized CVA capital charge	2,019	547	2,749	791
5	**Total subject to the CVA capital charge**	2,019	547	2,749	791

1. *For year 2018, CVA RWAs were calculated using the scalers of 0.80, 0.83 and 0.86 to compute CET1 capital ratio, Tier 1 capital ratio and Total capital ratio, respectively, including regulatory floor adjustment. For year 2019, OSFI has allowed a 0.7 scalar to be applied to the exposure amount determined under SA-CCR for the purpose of calculating CVA.*

Table 15: CCR exposures by portfolio and PD scale (CCR4)

PD scale	EAD post-CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
	$mn	%		%	years	$mn	%
Sovereign							
0.00 to <0.15	**434**	**0.04**	**57**	**10.0**	**1.32**	**10**	**2.3**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.50 to <0.75	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.75 to <2.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**
2.50 to <10.00	**—**	**—**	**—**	**—**	**—**	**—**	**—**
10.00 to <100.00	**—**	**—**	**—**	**—**	**—**	**—**	**—**
100.00 (Default)	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Sub-total	**434**	**0.04**	**57**	**10.0**	**1.32**	**10**	**2.3**
Banks							
0.00 to <0.15	**974**	**0.12**	**43**	**27.4**	**1.14**	**199**	**20.4**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**

0.25 to <0.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.50 to <0.75	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.75 to <2.50	**6**	**0.87**	**1**	**27.0**	**5.00**	**5**	**75.0**
2.50 to <10.00	**—**	**—**	**—**	**—**	**—**	**—**	**—**
10.00 to <100.00	**—**	**—**	**—**	**—**	**—**	**—**	**—**
100.00 (Default)	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Sub-total	**980**	**0.12**	**44**	**28.0**	**1.16**	**204**	**20.8**
Corporate – SME							
0.00 to <0.15	**2**	**0.13**	**7**	**52.0**	**1.00**	**1**	**30.0**
0.15 to <0.25	**4**	**0.22**	**13**	**52.0**	**3.70**	**3**	**0.7**
0.25 to <0.50	**7**	**0.37**	**23**	**52.0**	**2.10**	**5**	**0.7**
0.50 to <0.75	**13**	**0.63**	**33**	**52.0**	**3.90**	**14**	**1.1**
0.75 to <2.50	**12**	**1.34**	**54**	**52.0**	**2.40**	**15**	**1.2**
2.50 to <10.00	**4**	**6.01**	**18**	**52.0**	**1.20**	**7**	**1.7**
10.00 to <100.00	**1**	**12.79**	**7**	**52.0**	**1.00**	**3**	**2.6**
100.00 (Default)	**—**	**100.00**	**1**	**52.0**	**1.00**	**2**	**6.9**
Sub-total	**43**	**2.20**	**156**	**52.0**	**2.70**	**50**	**116.3**
Corporate – Other							
0.00 to <0.15	**832**	**0.09**	**97**	**52.0**	**1.90**	**233**	**30.0**
0.15 to <0.25	**200**	**0.22**	**47**	**52.0**	**2.60**	**115**	**60.0**
0.25 to <0.50	**174**	**0.37**	**96**	**52.0**	**2.10**	**130**	**70.0**
0.50 to <0.75	**100**	**0.63**	**56**	**52.0**	**1.90**	**85**	**90.0**
0.75 to <2.50	**255**	**1.42**	**394**	**52.0**	**1.40**	**308**	**120.0**
2.50 to <10.00	**33**	**3.62**	**14**	**52.0**	**2.20**	**54**	**160.0**
10.00 to <100.00	**—**	**—**	**—**	**—**	**—**	**—**	**—**
100.00 (Default)	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Sub-total	**1,594**	**0.46**	**704**	**52.0**	**1.95**	**925**	**58.0**
Grand-total at 31 Dec 2019	**3,051**	**0.32**	**961**	**38.3**	**1.62**	**1,189**	**39.0**
Sovereign							
0.00 to <0.15	438	0.03	61	10.0	1.47	10	2.0
0.15 to <0.25	—	—	—	—	—	—	—
0.25 to <0.50	—	—	—	—	—	—	—
0.50 to <0.75	—	—	—	—	—	—	—
0.75 to <2.50	—	—	—	—	—	—	—
2.50 to <10.00	—	—	—	—	—	—	—
10.00 to <100.00	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—
Sub-total	438	0.03	61	10.0	1.47	10	2.0
Banks							
0.00 to <0.15	649	0.12	32	28.2	1.34	131	20.0
0.15 to <0.25	—	—	—	—	—	—	—
0.25 to <0.50	8	0.37	2	27.2	4.60	4.2	100.0
0.50 to <0.75	—	—	—	—	—	—	—
0.75 to <2.50	—	—	—	—	—	—	—
2.50 to <10.00	—	—	—	—	—	—	—
10.00 to <100.00	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—
Sub-total	657	0.12	34	28.23	1.38	136	21.0
Corporate – SME							
0.00 to <0.15	1	0.13	6	52.0	1.05	—	28.0
0.15 to <0.25	3	0.22	30	52.0	2.86	2	100.0
0.25 to <0.50	9	0.37	27	52.0	1.42	5	100.0
0.50 to <0.75	2	0.63	29	52.0	1.08	1	—
0.75 to <2.50	10	0.97	58	52.0	1.96	10	—
2.50 to <10.00	3	4.14	16	52.0	1.03	5	—
10.00 to <100.00	—	—	2	52.0	—	—	—
100.00 (Default)	—	—	—	—	—	—	—
Sub-total	28	0.98	168.0	52.0	1.68	23	84.0
Corporate – Others							
0.00 to <0.15	800	0.06	168	52.0	1.68	178	22.0
0.15 to <0.25	569	0.22	58	52.0	2.45	320	100.0
0.25 to <0.50	78	0.37	56	52.0	2.63	59	100.0
0.50 to <0.75	90	0.63	58	52.0	2.81	92	100.0

0.75 to <2.50	168	1.51	231	52.0	1.28	206	100.0
2.50 to <10.00	5	3.45	6	52.0	3.33	9	200.0
10.00 to <100.00	4	10.00	4	52.0	1.00	8	200.0
100.00 (Default)	—	100.00	1	52.0	1.00	—	700.0
Sub-total	1,713	0.33	582.0	52.0	2.00	871	51.0
Grand-total at 31 Dec 2018	2,836	0.24	845.0	40.0	1.77	1,040	37.0

Table 16: Composition of collateral for CCR exposure (CCR5)

		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		$m	$m	$m	$m	$m	$m
1	Cash – domestic currency	**—**	**18**		**240**	**—**	**—**
2	Cash – other currencies	**—**	**192**		**268**	**—**	**—**
3	Domestic sovereign debt	**—**	**2**	**48**	**73**	**—**	**67**
4	Other sovereign debt	**—**	**—**	**—**	**—**	**—**	**—**
5	Government agency debt	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporate bonds	**—**	**—**	**—**	**—**	**—**	**—**
7	Equity securities	**—**	**—**	**—**	**—**	**—**	**—**
8	Other collateral	**—**	**—**	**—**	**—**	**—**	**—**
9	**Total at 31 Dec 2019**	**—**	**212**	**48**	**581**	**—**	**67**
1	Cash – domestic currency	—	22	—	403	—	—
2	Cash – other currencies	—	181	—	831	—	—
3	Domestic sovereign debt	—	46	**17**	48	—	**54**
4	Other sovereign debt	—	—	**33**	—	—	—
5	Government agency debt	—	—	—	—	—	—
6	Corporate bonds	—	—	—	—	—	—
7	Equity securities	—	—	—	—	—	—
8	Other collateral	—	—	—	—	—	—
9	Total at 31 Dec 2018	—	**249**	**50**	**1,282**	—	**54**

Table 17: Exposures to central counterparties (CCPs) - CCR8

		At 31 Dec 2019		At 31 Dec 2018	
		EAD post-CRM	RWA	EAD post-CRM	RWA
		$m	$m	$m	$m
1	**Exposures to QCCPs (total)**	391	17	885	18
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	308	7	816	17
3	– OTC derivatives	291	7	813	16
4	– exchange-traded derivatives	17	—	—	—
5	– securities financing transactions	—	—	3	1
6	– netting setts where cross-products netting has been approved	—	—	—	—
7	Segregated initial margin	67	1	54	1
8	Non-segregated initial margin	—	—	—	—
9	Pre-funded default fund contributions	16	9	15	—
10	Unfunded default fund contributions	—	—	—	—
11	**Exposures to non- QCCPs (total)**	—	—	—	—
12	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	—	—	—	—
13	– OTC derivatives	—	—	—	—
14	– exchange-traded derivatives	—	—	—	—
15	– securities financing transactions	—	—	—	—
16	– netting setts where cross-products netting has been approved	—	—	—	—
17	Segregated initial margin	—	—	—	—
18	Non-segregated initial margin	—	—	—	—
19	Pre-funded default fund contributions	—	—	—	—
20	Unfunded default fund contributions	—	—	—	—

1. *QCCP - Qualifying Central Counterparty*

Market Risk

Market Risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spread, equity prices and commodity prices will reduce the value of our portfolios.

Exposure to Market Risk

The bank objective is to manage and control market risk exposures in order to optimise return on risk while maintaining a market profile consistent within our established risk appetite. The nature of the hedging and risk mitigation strategies performed corresponds to the market risk management instruments available. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

Market Risk Governance (MRA)

HSBC Bank Canada's strategic objectives in undertaking trading activities are to solidify the Bank's position as the leading international bank in Canada through finance-focused and emerging markets-led strategy. The Bank delivers global products and solutions to domestic clients, and provides global clients access to local products and services.

Market Risk is the independent oversight unit within HSBC Bank Canada and has a mandate to ensure that market risks are within the risk appetite of the Bank. Market Risk is responsible for the daily calculation of market risk measures and backtesting reports, setting of limits and monitoring exposures against limits, and calculation and reporting of capital charges. The Global Risk Analytics team, which is responsible for development and monitoring the performance of model methodology, as well as liaison with external regulators, works closely with the core Market Risk team.

The Audit, Risk and Conduct Review Committee (ARC), a committee of the Board of Directors, has non-executive responsibility for oversight and advice to the Board on matters related to financial reporting and high-level risk related matters and governance. The Risk Management Meeting (RMM) has a mission to provide strategic enterprise-wide risk management. A subcommittee of the RMM is the Risk Markets Model Oversight Committee, which is primarily responsible for oversight (including approval, monitoring, vetting, ensuring fitness of purpose, etc.) of models.

Internal Model Approach (IMA)

HSBC Bank Canada has permission to use the internal model approach to calculate general market risk based on the VaR and Stressed VaR components and relies on the standard charge approach to measure the interest rate specific risk. The Stressed VaR is primarily used for regulatory capital purposes and is integrated into the risk management process to ensure prudent capital management. Stressed VaR complements other risk measures by providing the potential losses under stressed market conditions. The Stressed VaR is calibrated to a one-year period of stress observed in history. For risk management purposes 1-day VaR and 10-day Stressed VaR are computed. For regulatory purposes, 10-day VaR and 10-day Stressed VaR are computed. The standard charge is aggregated with the VaR and Stressed VaR contributions when computing the market risk capital charge.

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.
We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

We use sensitivity measures to monitor the market risk positions within each risk type. Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

Value at risk

Value at risk ('VaR') is a technique that estimates the potential losses on risk positions in the trading portfolio as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and is calculated for all trading positions regardless of how we capitalise those exposures. VaR is calculated at a 99% confidence level for a one-day holding period. Our VaR models derive plausible future scenarios from past series of recorded market rates and prices, taking into account interrelationships between different markets and rates such as interest rates and foreign exchange rates. Relative returns are used for credit spreads and exchange rates and absolute returns are used for interest rates.

We use the past two years as the data set in our VaR models, which is updated on a fortnightly basis, and these scenarios are then applied to the market baselines and trading positions on a daily basis. The models also incorporate the effect of option features on the underlying exposures. The valuation approach used in our models values linear instruments, such as bonds and swaps, using a sensitivity-based approach. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR even without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:
- Use of historical data as a proxy for estimating future events may not encompass all potential events, particularly extreme ones.
- The use of a holding period assumes that all positions can be liquidated or the risks offset during that period, which may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully.

- The use of a 99% confidence level does not take into account losses that might occur beyond this level of confidence.
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

Back-testing

We routinely validate the accuracy of our VaR models by back testing them against hypothetical profit and loss. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions. This is done at various levels, including total trading book, lines of business, and at the risk factor level.

Stress testing

Stress testing is an important procedure that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be greater than those predicted by VaR modelling. The market risk stress testing incorporates the historical and hypothetical events either globally or locally-defined. The locally-defined scenarios are chosen based on the HSBC Bank Canada portfolio and relevant risk factors. Stressed profit and loss figures are compared against referral limits and breaches are reported to senior management. Market risk reverse stress tests are undertaken on the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios that are beyond normal business settings and could have contagion and systemic implications.

Table 18: Market risk under standardised approach (MR1)

		At		
		31 Dec 2019	31 Dec 2018	**31 Dec 2019**
		RWA	RWA	**Capital requirements**
		$m	$m	**$m**
	Outright products			
1	Interest rate risk (general and specific)	**160**	138	**13**
2	Equity risk (general and specific)	**—**	—	**—**
3	Foreign exchange risk	**—**	—	**—**
4	Commodity risk	**—**	—	**—**
	Options			
6	Delta-plus method	**—**	—	**—**
7	Scenario approach	**—**	—	**—**
8	**Securitisation**	**—**	—	**—**
9	**Total**	**160**	138	**13**

Table 19 : RWA flow statement of market risk exposures under Internal Model Approach (MR2)

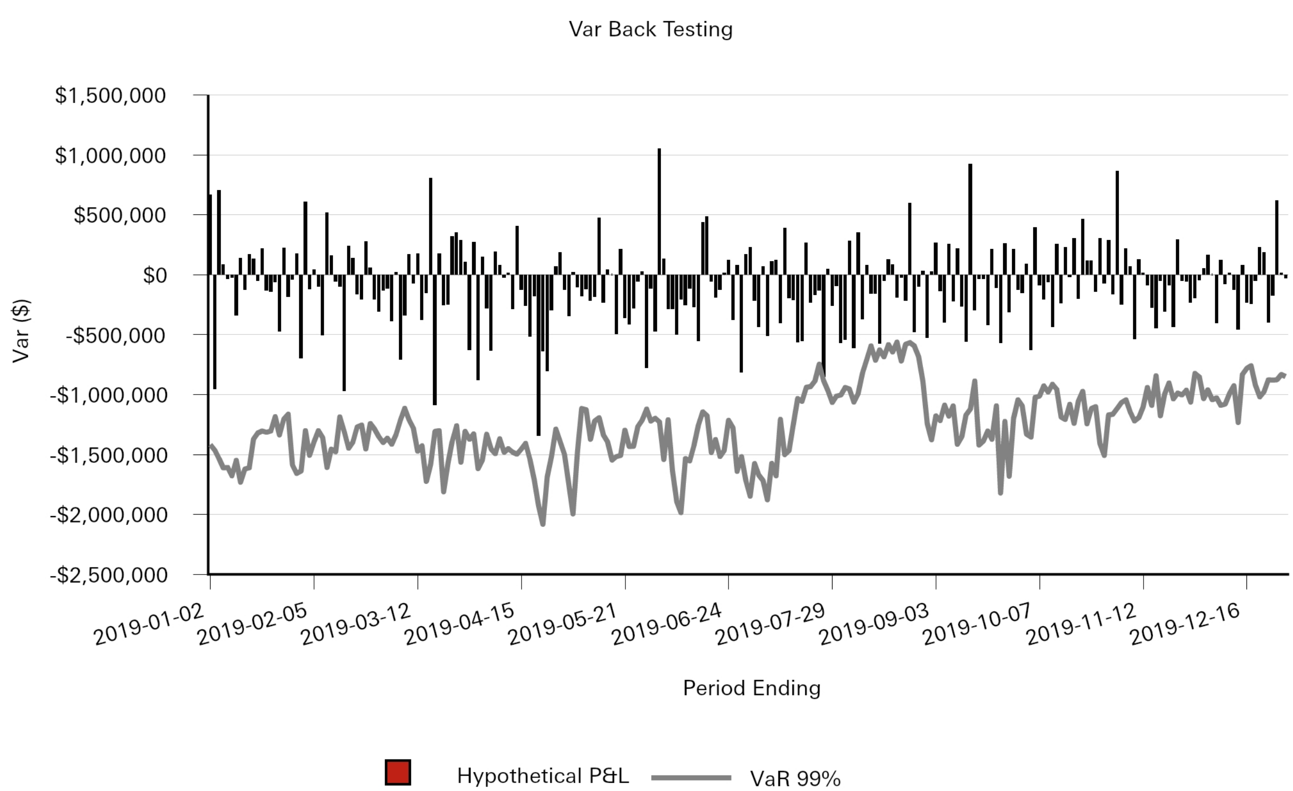
		VaR	Stressed VaR	Other	Total RWA
		$m	$m	$m	$m
1	**RWA at the beginning of the period - 1 Oct 2019**	**171**	**442**	**—**	**613**
2	Movement in risk levels[1]	**(9)**	**(54)**	**—**	**(63)**
3	Model updates/changes	**—**	**—**	**—**	**—**
4	Methodology and policy	**—**	**—**	**51**	**51**
8	**RWA at the end of the period - 31 Dec 2019**	**162**	**388**	**51**	**601**

1. *Movement due to position changes; foreign exchange movements are embedded in the movement in risk levels*

Table 20: IMA values for trading portfolios (MR3)

	At	
	31 Dec 2019	31 Dec 2018
	$'000	$'000
VaR		
1 Maximum value	**4,770**	6,049
2 Average value	**3,275**	4,769
3 Minimum value	**2,296**	3,274
4 Period end	**2,296**	4,480
Stressed VaR		
5 Maximum value	**9,432**	12,073
6 Average value	**7,871**	9,142
7 Minimum value	**6,751**	7,194
8 Period end	**6,751**	11,051
Incremental Risk Charge		
9 Maximum value	**–**	0
10 Average value	**–**	–
11 Minimum value	**–**	–
12 Period end	**–**	–
Comprehensive Risk capital charge		
13 Maximum value	**–**	–
14 Average value	**–**	–
15 Minimum value	**–**	–
16 Period end	**–**	–
17 Floor (standardized measurement method)	**–**	–

Table 21: Comparison of VaR estimates with gains/losses (MR4)



There were no back-testing exceptions noted for the year 2019.

Table 22 : Leverage Ratio Common Disclosure Template (LR2)

		At	
		31 Dec 2019	30 Sep 2019
		$m	$m
	On-balance sheet exposures		
1	On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	**97,036**	100,441
2	Gross up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework (IFRS)	**—**	—
3	(Deductions of receivables assets for cash variation margin provided in derivative transactions)	**(510)**	(1,013)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	**(245)**	(281)
5	**Total on-balance sheet exposures (excluding derivatives and SFTs) (Sum of lines 1 to 4)**	**96,281**	99,147
	Derivative exposures		
6	Replacement cost associated with all derivative transactions (i.e. net of eligible cash variation margin)	**1,092**	1,315
7	Add-on amounts for PFE associated with all derivative transactions	**2,102**	1,995
8	(Exempted CCP-leg of client cleared trade exposures)	**—**	—
9	Adjusted effective notional amount of written credit derivatives	**—**	—
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	**—**	—
11	**Total derivative exposures (sum of lines 6 to 10)**	**3,194**	3,310
	Securities financing transaction exposures		
12	Gross SFT assets recognized for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	**8,194**	10,266
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	**(1,925)**	(2,651)
14	Counterparty credit risk (CCR) exposure for SFTs	**95**	285
15	Agent transaction exposures	**—**	—
16	**Total securities financing transaction exposures (sum of lines 12 to 15)**	**6,364**	7,900
	Other off-balance sheet exposures		
17	Off-balance sheet exposure at gross notional amount	**48,175**	48,754
18	(Adjustments for conversion to credit equivalent amounts)	**(33,374)**	(34,033)
19	**Off-balance sheet items (sum of lines 17 and 18)**	**14,801**	14,721
	Capital and Total Exposures		
20	Tier 1 capital	**5,863**	5,816
21	**Total Exposures (sum of lines 5, 11, 16 and 19)**	**120,640**	125,078
	Leverage Ratios (%)		
22	Leverage ratio	**4.9**	4.7

Glossary

- **OSFI** - Office of the Superintendent of Financial Institutions
- **$** - Canadian dollar
- **Gross carrying values**: The gross value is the accounting value before any any credit conversion factor (CCF), credit risk mitigation (CRM) techniques or allowance/impairments.
- **Probability of Default (PD)** - An estimate of the likelihood of a customer defaulting on any credit related obligation within a 1 year time horizon, expressed as a percentage.
- **Loss Given Default (LGD)** - An estimate of the economic loss, expressed as a percentage (0%-100%) of the exposure at default, that the Bank will incur in the event a borrower defaults
- **Exposure At Default (EAD)** - An estimate of the amount of exposure to a customer at the time of default.
- **Standardized Approach for credit risk** - Under this approach, banks use a standardized set of risk-weights as prescribed by OSFI to calculate credit risk capital requirements. The standardized risk-weights are based on external credit assessments, where available, and other risk-related factors, including exposure asset class, collateral, etc.
- **Advanced Internal Ratings Based (AIRB) approach for credit risk** - Under this approach, banks use their own internal historical experience of PD, LGD, EAD and other key risk assumptions to calculate credit risk capital requirements.
- **Home Equity Lines of Credit (HELOC)** - Revolving personal lines of credit secured by home equity.
- **SA-CCR** - The standardised approach (SA-CCR) for measuring exposure at default for counterparty credit risk.
- **Credit Value adjustment (CVA) -** Credit valuation adjustment ('CVA') risk is the risk of adverse moves in the CVAs taken for expected credit losses on derivative transactions.
- **VaR - Value at Risk -** Value at risk ('VaR') is a technique that estimates the potential losses on risk positions in the trading portfolio as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence.
- **All-in regulatory capita**l assumes that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022.
- **Transitional regulatory capital** assumes that all Basel III regulatory capital adjustments are phased in from January 1, 2014 to January 1, 2018 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022.
- **Asset size**: organic changes in book size and composition (including origination of new businesses and maturing loans) but excluding changes in book size due to acquisitions and disposal of entities.
- **Asset quality**: changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration or similar effects.
- **Model updates**: changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses.
- **Methodology and policy**: changes due to methodological changes in calculations driven by regulatory policy changes, including both revisions to existing regulations and new regulations.
- **Acquisitions and disposals**: changes in book sizes due to acquisitions and disposal of entities.