Supplemental Regulatory Disclosure

For the Third Quarter Ended July 31, 2019

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Introduction

The information contained in this package is designed to facilitate the readers' understanding of the capital requirements of TD Bank Group ("TD" or the "Bank"). This information should be used in conjunction with the Bank's third quarter 2019 Report to Shareholders, Earnings News Release, Supplemental Financial Information, and Investor Presentation, as well as the Bank's 2018 Annual Report. For Basel-related terms and acronyms used in this package, refer to the "Glossary – Basel" and "Acronyms" pages, respectively.

How the Bank Reports

The Bank prepares its Consolidated Financial Statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board, the current generally accepted accounting principles, and refers to results prepared in accordance with IFRS as "reported" results. Certain comparative amounts have been revised to conform with the presentation adopted in the current period.

Basel III Reporting

The Office of the Superintendent of Financial Institutions Canada (OSFI) has implemented a phased-in approach to the Credit Valuation Adjustment (CVA) component included in credit risk-weighted assets (RWA). The CVA capital charge phase-in is based on a scalar approach whereby a CVA capital charge of 80%, applicable in 2018 for the Common Equity Tier 1 (CET1) calculation, has increased to 100% in 2019. A different scalar applies to the CET1, Tier 1, and Total Capital ratios. Therefore, each capital ratio has its own RWA measure. For fiscal 2018, the scalars for inclusion of CVA for CET1, Tier 1, and Total Capital RWA were 80%, 83%, and 86%, respectively. For fiscal 2019, the corresponding scalars are all 100%. Effective in the second quarter of 2018, OSFI implemented a revised methodology for calculating the regulatory capital floor. The revised floor is based on the Basel II standardized approach, with the floor factor transitioned in over three quarters. The factor increases from 70% in the second quarter of 2018, to 72.5% in the third quarter, and 75% in the fourth quarter. Under the revised methodology, the Bank is no longer constrained by the capital floor. All three RWA measures are disclosed as part of the RWA disclosures on page 10, as well as the Capital Position disclosures on pages 1 to 3.

OSFI approved the Bank i) to use the Advanced Measurement Approach, and ii) to calculate the majority of the retail portfolio credit RWA in the U.S. Retail segment using the Advanced Internal Ratings-Based (AIRB) Approach.

Effective the fourth quarter of 2018, the Bank implemented the new Pillar 3 disclosure requirements. As noted in the Pillar 3 disclosure Index on the following pages, the disclosures are grouped by topic. Of note, Part 4 – Credit Risk consists of credit risk exposures excluding counterparty credit risk (CCR) and includes drawn, undrawn and other off-balance sheet exposures whereas CCR for Part 5 – CCR includes repo-style transactions and derivative exposures. The glossary provides additional details of items included in these exposure types.

RWA disclosed in each disclosure include the 6% OSFI prescribed scaling factor, where applicable.

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Pillar 3 Disclosure Requirements – In January 2015, the Basel Committee on Banking Supervision (BCBS) published the standard for the *Revised Pillar 3 Disclosure Requirements* (Revised Basel Pillar 3 standard). The Revised Basel Pillar 3 standard aim to address the problems identified through the financial crisis and to improve comparability and consistency of financial regulatory disclosures through more standardized formats between banks and across jurisdictions. Furthermore, OSFI issued the Pillar 3 Disclosure Requirements guideline April 2017, effective October 31, 2018. The index below includes disclosure requirement per the BCBS document (and required by OSFI) and lists the location of the related disclosures presented in the third quarter 2019, Report to Shareholders (RTS), or Supplemental Financial Information (SFI), or Supplemental Regulatory Disclosures (SRD). Information on TD's website, SFI, and SRD is not and should not be considered incorporated herein by reference into the 2018 Annual Report, Management's Discussion and Analysis, or the Consolidated Financial Statements.

Topic	Pillar 3 Disclosure Requirements		Page			
		Frequency	RTS Third Quarter 2019	SFI Third Quarter 2019	SRD Third Quarter 2019	Annual Report 2018
Part 2 – Overview of risk management	**OVA** – Bank risk management approach.	Annual				10, 60, 67-76, 84, 101
	OV1 – Overview of RWA.	Quarterly			10	
Part 3 – 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.	Quarterly			13	
	LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements.	Quarterly			14	
	LIA – Explanations of differences between accounting and regulatory exposure amounts.	Quarterly			14	
Part 4 – Credit risk	**CRA** – General information about credit risk.	Annual				72-74, 76-79
	CR1 – Credit quality of assets.	Quarterly			15	
	CR2 – Changes in stock of defaulted loans and debt securities[1].	Quarterly				
	CRB – Additional disclosure related to the credit quality of assets a) to d).	Annual				80, 130-131, 137, 169
	CRB – Additional disclosure related to the credit quality of assets – e) Breakdown of exposures by geographical areas, industry and residual maturity[1].	Quarterly			16-18	
	CRB – Additional disclosure related to the credit quality of assets – f) Amounts of impaired exposures (according to definition used by the bank for accounting purposes) and related allowances and write-offs broken down by geographical areas and industry.	Quarterly		20-22, 25-27		
	CRB – Additional disclosure related to the credit quality of assets – g) Ageing analysis of accounting past-due exposures[1].	Quarterly	67			169
	CRB – Additional disclosure related to the credit quality of assets – h) Breakdown of restructured exposures between impaired and not impaired exposures.	Quarterly			15	
	CRC – Qualitative disclosure requirements related to credit risk mitigation techniques.	Annual				80
	CR3 – Credit risk mitigation techniques – overview.	Quarterly			15	
	CRD – Qualitative disclosures on banks' use of external credit ratings under the standardized approach (TSA) for credit risk.	Annual				79
	CR4 – Standardized approach – credit risk exposure and Credit Risk Mitigation (CRM) effects.	Quarterly			19	
	CR5 – Standardized approach – exposures by asset classes and risk weights.	Quarterly			20	
	CRE – Qualitative disclosures related to IRB models.	Annual				72-74, 77-81, 89
	CR6 – IRB – Credit risk exposures by portfolio and probability of default (PD) range.	Quarterly			21-34	

Topic	Pillar 3 Disclosure Requirements	Frequency	Page			
			RTS Third Quarter 2019	SFI Third Quarter 2019	SRD Third Quarter 2019	Annual Report 2018
Part 4 – Credit risk	**CR7** – IRB – Effect on RWA of credit derivatives used as CRM techniques.	N/A[2]	Impact is immaterial and has been disclosed in CR3, footnote 3.			
	CR8 – RWA flow statements of credit risk exposures under IRB.	Quarterly			11	
	CR9 – IRB – Backtesting of PD per portfolio[3].	Annual				
	CR10 – IRB (specialized lending and equities under the simple risk weight method).	N/A		TD does not use this approach.		
Part 5 – Counterparty credit risk	**CCRA** – Qualitative disclosure related to CCR.	Annual				79-80, 95
	CCR1 – Analysis of CCR exposure by approach.	Quarterly			35	
	CCR2 – CVA capital charge.	Quarterly			36	
	CCR3 – Standardized approach of CCR exposures by regulatory portfolio and risk weights.	Quarterly			36	
	CCR4 – IRB – CCR exposures by portfolio and PD scale.	Quarterly			37-42	
	CCR5 – Composition of collateral for CCR exposure.	Quarterly			43	
	CCR6 – Credit derivatives exposures.	Quarterly			44	
	CCR7 – RWA flow statements of CCR exposures under the Internal Model Method (IMM).	N/A	TD does not use IMM			
	CCR8 – Exposures to central counterparties.	Quarterly			44	
Part 6 – Securitization	**SECA** – Qualitative disclosure requirements related to securitization exposures.	Annual				64-65, 81, 134, 171-172
	SEC1 – Securitization exposures in the banking book.	Quarterly			48	
	SEC2 – Securitization exposures in the trading book.	Quarterly			48	
	SEC3 – Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor.	Quarterly			49	
	SEC4 – Securitization exposures in the banking book and associated capital requirements – bank acting as investor.	Quarterly			50	
Part 7 – Market risk[1]	**MRA** – Qualitative disclosure requirements related to market risk.		TD has deferred these disclosures as allowed per OSFI's Pillar 3 guideline issued April 2017			
	MRB – Qualitative disclosures for banks using the Internal Models Approach (IMA).					
	MR1 – Market risk under standardized approach.					
	MR2 – RWA flow statements of market risk exposures under an IMA.					
	MR3 – IMA values for trading portfolios.					
	MR4 – Comparison of VaR[4] estimates with gains/losses.					

[1] Current disclosures in SFI and annual report do not contain any exposures related to the deconsolidated insurance entities, therefore the Pillar 3 requirements are fulfilled based on current disclosure.
[2] Not applicable.
[3] For annual disclosures, refer to the fourth quarter 2018 SRD.
[4] Value-at-Risk.

Capital Position – Basel III

($ millions) *As at*	Line #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	Cross Reference[1]
Common Equity Tier 1 Capital							
Common shares plus related contributed surplus	1	**$ 21,834**	$ 21,830	$ 21,679	$ 21,267	$ 21,123	A1+A2+B
Retained earnings	2	**48,818**	47,980	46,660	46,145	44,223	C
Accumulated other comprehensive income (loss)	3	**9,933**	9,743	7,983	6,639	6,498	D
Directly issued capital subject to phase out from CET1	4	**–**	–	–	–	–	
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	5	**–**	–	–	–	–	
Common Equity Tier 1 Capital before regulatory adjustments	6	**80,585**	79,553	76,322	74,051	71,844	
Common Equity Tier 1 Capital regulatory adjustments							
Prudential valuation adjustments	7	**–**	–	–	–	–	
Goodwill (net of related tax liability)	8	**(19,752)**	(20,022)	(19,681)	(19,285)	(19,079)	E1+E2-E3
Intangibles (net of related tax liability)	9	**(2,388)**	(2,417)	(2,402)	(2,236)	(2,254)	F1-F2
Deferred tax assets excluding those arising from temporary differences	10	**(221)**	(248)	(279)	(317)	(248)	G
Cash flow hedge reserve	11	**(606)**	389	1,122	2,568	2,228	H
Shortfall of provisions to expected losses	12	**(1,236)**	(1,233)	(977)	(953)	(967)	I
Securitization gain on sale	13	**–**	–	–	–	–	
Gains and losses due to changes in own credit risk on fair valued liabilities	14	**(154)**	(116)	(111)	(115)	(109)	J
Defined benefit pension fund net assets (net of related tax liability)	15	**(10)**	(10)	(9)	(113)	(65)	K
Investment in own shares	16	**(23)**	(31)	(14)	(123)	–	
Reciprocal cross holdings in common equity	17	**–**	–	–	–	–	
Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	18	**–**	–	–	–	–	
Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	19	**(1,717)**	(1,596)	(1,303)	(1,088)	(1,254)	L1+L2+L3
Mortgage servicing rights (amount above 10% threshold)	20	**–**	–	–	–	–	
Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	21	**–**	–	–	–	–	
Amount exceeding the 15% threshold	22	**–**	–	–	–	–	
of which: significant investments in the common stock of financials	23	**–**	–	–	–	–	
of which: mortgage servicing rights	24	**–**	–	–	–	–	
of which: deferred tax assets arising from temporary differences	25	**–**	–	–	–	–	
Other deductions or regulatory adjustments to CET1 as determined by OSFI	26	**–**	–	–	–	–	
Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	27	**–**	–	–	–	–	
Total regulatory adjustments to Common Equity Tier 1 Capital	28	**(26,107)**	(25,284)	(23,654)	(21,662)	(21,748)	
Common Equity Tier 1 Capital	29	**54,478**	54,269	52,668	52,389	50,096	
Additional Tier 1 capital instruments							
Directly issued qualifying Additional Tier 1 instruments plus stock surplus	30	**5,797**	5,345	5,348	4,996	4,600	M+N+O
of which: classified as equity under applicable accounting standards	31	***5,797***	*5,345*	*5,348*	*4,996*	*4,600*	
of which: classified as liabilities under applicable accounting standards	32	**–**	–	–	–	–	
Directly issued capital instruments subject to phase out from Additional Tier 1	33	**1,189**	1,744	1,730	2,455	2,456	P
Additional Tier 1 instruments issued by subsidiaries and held by third parties	34	**–**	–	–	245	245	
of which: instruments issued by subsidiaries subject to phase out	35	**–**	–	–	–	–	
Additional Tier 1 capital instruments before regulatory adjustments	36	**6,986**	7,089	7,078	7,696	7,301	
Additional Tier 1 capital instruments regulatory adjustments							
Investment in own Additional Tier 1 instruments	37	**–**	–	–	–	–	
Reciprocal cross holdings in Additional Tier 1 instruments	38	**–**	–	–	–	–	
Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	39	**–**	–	–	–	–	
Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	40	**(350)**	(350)	(350)	(350)	(350)	Q
Other deductions from Tier 1 capital as determined by OSFI	41	**–**	–	–	–	–	
of which: Reverse mortgages	41a	**–**	–	–	–	–	
Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	42	**–**	–	–	–	–	
Total regulatory adjustments to Additional Tier 1 Capital	43	**(350)**	(350)	(350)	(350)	(350)	
Additional Tier 1 Capital	44	**6,636**	6,739	6,728	7,346	6,951	
Tier 1 Capital	45	**$ 61,114**	$ 61,008	$ 59,396	$ 59,735	$ 57,047	

[1] Cross referenced to the Reconciliation with Balance Sheet Under Regulatory Scope of Consolidation table on page 5.

Capital Position – Basel III (Continued)

($ millions) *As at*	Line #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	Cross Reference[1]
Tier 2 capital instruments and provisions							
Directly issued qualifying Tier 2 instruments plus related stock surplus	46	**$ 10,398**	$ 8,770	$ 8,695	$ 8,927	$ 7,184	R
Directly issued capital instruments subject to phase out from Tier 2	47	**198**	198	198	198	199	S
Tier 2 instruments issued by subsidiaries and held by third parties	48	**–**	–	–	–	–	
of which: instruments issued by subsidiaries subject to phase out	49	**–**	–	–	–	–	
Collective allowance	50	**1,819**	1,811	1,862	1,734	1,665	T
Tier 2 Capital before regulatory adjustments	51	**12,415**	10,779	10,755	10,859	9,048	
Tier 2 regulatory adjustments							
Investments in own Tier 2 instruments	52	**–**	(7)	(23)	–	(2)	
Reciprocal cross holding in Tier 2 instruments and Other TLAC-eligible instruments[2]	53	**–**	–	–	–	–	
Non-significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation, where the institution does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	54	**–**	–	–	–	–	
Non-significant investments in the other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs, where the institution does not own more than 10% of the issued common share capital of the entity: amount previously designated for the 5% threshold but that no longer meets the conditions	54a	**–**	–	–	–	–	
Significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation	55	**(160)**	(160)	(160)	(160)	(160)	U
Other deductions from Tier 2 capital	56	**–**	–	–	–	–	
Total regulatory adjustments to Tier 2 Capital	57	**(160)**	(167)	(183)	(160)	(162)	
Tier 2 Capital	58	**12,255**	10,612	10,572	10,699	8,886	
Total Capital	59	**73,369**	71,620	69,968	70,434	65,933	
Total risk-weighted assets	60	**454,881**	452,267	439,324	n/a	n/a	
Common Equity Tier 1 Capital RWA[3]	60a	**n/a**	n/a	n/a	435,632	428,943	
Tier 1 Capital RWA[3]	60b	**n/a**	n/a	n/a	435,780	429,083	
Total Capital RWA[3]	60c	**$ n/a**	$ n/a	$ n/a	$ 435,927	$ 429,222	
Capital Ratios							
Common Equity Tier 1 Capital (as percentage of RWA)	61	**12.0 %**	12.0 %	12.0 %	12.0 %	11.7 %	
Tier 1 (as percentage of RWA)	62	**13.4**	13.5	13.5	13.7	13.3	
Total Capital (as percentage of RWA)	63	**16.1**	15.8	15.9	16.2	15.4	
Buffer requirement (minimum CET1 requirement plus capital conservation buffer plus global systemically important banks (G-SIBs) buffer plus domestic systemically important banks (D-SIBs) buffer requirement expressed as percentage of RWA)[4,5]	64	**8.0**	8.0	8.0	8.0	8.0	
of which: capital conservation buffer requirement	65	***2.5***	*2.5*	*2.5*	*2.5*	*2.5*	
of which: bank-specific countercyclical buffer requirement[6]	66	**–**	–	–	–	–	
of which: G-SIB buffer requirement	67	**–**	–	–	–	–	
of which: D-SIB buffer requirement[7]	67a	***1.0***	*1.0*	*1.0*	*1.0*	*1.0*	
Common Equity Tier 1 available to meet buffers (as percentage of RWA)	68	**12.0**	12.0	12.0	12.0	11.7	
OSFI target (minimum plus conservation buffer plus D-SIB surcharge (if applicable))[8]							
Common Equity Tier 1 target ratio	69	**8.0**	8.0	8.0	8.0	8.0	
Tier 1 target ratio	70	**9.5**	9.5	9.5	9.5	9.5	
Total Capital target ratio	71	**11.5**	11.5	11.5	11.5	11.5	

[1] Cross referenced to the Reconciliation with Balance Sheet Under Regulatory Scope of Consolidation table on page 5.
[2] Total loss absorbing capacity (TLAC).
[3] Prior to fiscal 2019, each capital ratio had its own RWA measure due to the OSFI prescribed scalar for inclusion of the CVA. For fiscal 2019, CVA is fully phased in, therefore there is only one RWA measure for all ratios. For fiscal 2018, the corresponding scalars were 80%, 83%, and 86%, respectively.
[4] The minimum CET1 requirement prior to the buffers is 4.5%.
[5] The Financial Stability Board (FSB), in consultation with BCBS and national authorities, has identified the 2018 list of global systemically important banks (G-SIBs), using 2017 fiscal year-end data. The Bank was not identified as a G-SIB.
[6] The countercyclical buffer surcharge is in effect.
[7] Common equity capital domestic systemically important bank (D-SIB) surcharge is in effect.
[8] Reflects Pillar 1 targets and does not include Pillar 2 domestic stability buffer of 1.75%.

Capital Position – Basel III (Continued)

($ millions, except as noted) *As at*	Line #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3
Amounts below the thresholds for deduction (before risk weighting)						
Non-significant investments in the capital and Other TLAC-eligible instruments of other financials entities	72	**$ 1,777**	$ 1,541	$ 1,682	$ 4,273	$ 3,075
Significant investments in the common stock of financials	73	**5,620**	5,586	5,397	5,348	5,135
Mortgage servicing rights (net of related tax liability)	74	**47**	43	41	39	37
Deferred tax assets arising from temporary differences (net of related tax liability)	75	**797**	897	944	885	1,029
Applicable caps on the inclusion of allowances in Tier 2						
Allowance eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)	76	**1,819**	1,811	1,862	1,734	1,665
Cap on inclusion of allowances in Tier 2 under standardized approach	77	**2,135**	2,129	2,152	2,070	2,020
Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	78	**–**	–	–	–	–
Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	79	**–**	–	–	–	–
Capital instruments subject to phase-out arrangements (only applicable between January 1, 2013 to January 1, 2022)						
Current cap on CET1 instruments subject to phase out arrangements	80	**–**	–	–	–	–
Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)	81	**–**	–	–	–	–
Current cap on Additional Tier 1 instruments subject to phase out arrangements	82	**2,025**	2,025	2,025	2,700	2,700
Amounts excluded from Additional Tier 1 due to cap (excess over cap after redemptions and maturities)	83	**–**	–	–	31	284
Current cap on Tier 2 instruments subject to phase out arrangements	84	**2,629**	2,629	2,629	3,505	3,505
Amounts excluded from Tier 2 due to cap (excess over cap after redemptions and maturities)	85	**–**	–	–	–	–
Capital Ratios for significant bank subsidiaries						
TD Bank, National Association (TD Bank, N.A.)[9]						
Common Equity Tier 1 Capital	86	**15.3 %**	15.3 %	15.0 %	14.9 %	14.7 %
Tier 1 Capital	87	**15.3**	15.3	15.0	14.9	14.7
Total Capital	88	**16.2**	16.2	15.9	15.7	15.6
TD Mortgage Corporation						
Common Equity Tier 1 Capital	89	**42.8**	41.2	41.1	40.7	39.9
Tier 1 Capital	90	**42.8**	41.2	41.1	40.7	39.9
Total Capital	91	**43.4**	41.9	41.8	41.6	40.7

[9] On a stand-alone basis, TD Bank, N.A. reports regulatory capital to the Office of the Comptroller of the Currency on calendar quarter ends.

Flow Statement for Regulatory Capital[1]

($ millions)	Line #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3
Common Equity Tier 1						
Balance at beginning of period	1	**$ 54,269**	$ 52,668	$ 52,389	$ 50,096	$ 49,485
New capital issues	2	**45**	24	394	28	28
Redeemed capital[2]	3	**(865)**	(415)	(313)	–	(1,457)
Gross dividends (deductions)	4	**(1,409)**	(1,412)	(1,287)	(1,274)	(1,281)
Shares issued in lieu of dividends (add back)	5	**92**	98	99	94	89
Profit attributable to shareholders of the parent company[3]	6	**3,248**	3,172	2,392	2,942	3,087
Removal of own credit spread (net of tax)	7	**(38)**	(5)	4	(6)	9
Movements in other comprehensive income						
Currency translation differences	8	**(837)**	1,020	(112)	596	656
Available-for-sale investments	9	**n/a**	n/a	n/a	n/a	n/a
Financial assets at fair value through other comprehensive income	10	**20**	1	11	(113)	(11)
Other	11	**12**	6	(1)	(2)	(2)
Goodwill and other intangible assets (deduction, net of related tax liability)	12	**299**	(356)	(562)	(188)	(203)
Other, including regulatory adjustments and transitional arrangements						
Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)	13	**27**	31	38	(69)	(127)
Prudential valuation adjustments	14	**–**	–	–	–	–
Other	15	**(385)**	(563)	(384)	285	(177)
Balance at end of period	16	**54,478**	54,269	52,668	52,389	50,096
Additional Tier 1 Capital						
Balance at beginning of period	17	**6,739**	6,728	7,346	6,951	6,949
New additional Tier 1 eligible capital issues	18	**450**	–	350	400	–
Redeemed capital	19	**(550)**	–	(298)	–	–
Other, including regulatory adjustments and transitional arrangements	20	**(3)**	11	(670)	(5)	2
Balance at end of period	21	**6,636**	6,739	6,728	7,346	6,951
Total Tier 1 Capital	22	**61,114**	61,008	59,396	59,735	57,047
Tier 2 Capital						
Balance at beginning of period	23	**10,612**	10,572	10,699	8,886	9,536
New Tier 2 eligible capital issues	24	**1,750**	–	–	1,750	–
Redeemed capital	25	**–**	–	–	–	(650)
Amortization adjustments	26	**–**	–	–	–	–
Allowable collective allowance	27	**8**	(51)	128	69	(56)
Other, including regulatory adjustments and transitional arrangements	28	**(115)**	91	(255)	(6)	56
Balance at end of period	29	**12,255**	10,612	10,572	10,699	8,886
Total Regulatory Capital	30	**$ 73,369**	$ 71,620	$ 69,968	$ 70,434	$ 65,933

[1] The statement is based on the applicable regulatory rules in force at the period end.
[2] Represents impact of shares repurchased for cancellation.
[3] Profit attributable to shareholders of the parent company reconciles to the income statement.

Reconciliation with Balance Sheet Under Regulatory Scope of Consolidation

($ millions) *As at*	Line #	2019 Q3 Balance Sheet[1]	Under Regulatory scope of consolidation[2]		Cross Reference[3]
Cash and due from banks	1	$ 5,012	$	$ 5,012	
Interest-bearing deposits with banks	2	34,697		34,646	
Trading loans, securities, and other	3	142,161		142,161	
Non-trading financial assets at fair value through profit or loss	4	6,033		5,510	
Derivatives	5	52,555		52,555	
Financial assets designated at fair value through profit or loss	6	4,018		1,730	
Financial assets at fair value through other comprehensive income	7	116,700		114,625	
Debt securities at amortized cost, net of allowance for credit losses	8	116,390		116,156	
Securities purchased under reverse repurchase agreements	9	162,644		162,644	
Loans	10	679,701		679,701	
Allowance for loan losses	11	(3,769)		(3,769)	
Eligible allowance reflected in Tier 2 regulatory capital	12		*(1,819)*		T
Shortfall of allowance to expected loss	13		*(1,236)*		I
Allowances not reflected in regulatory capital	14		*(714)*		
Other	15	89,300		87,223	
Investment in TD Ameritrade					
Significant investments exceeding regulatory thresholds	16		*1,410*		L1
Significant investments not exceeding regulatory thresholds	17		*4,843*		
Imputed goodwill	18		*2,855*		E1
Goodwill	19		17,006		E2
Other intangibles	20		2,518		F1
Other intangibles (Mortgage Servicing Rights)	21		47		
Deferred tax assets					
Deferred tax assets (DTA) excluding those arising from temporary differences	22		*221*		G
DTA's (net of associated deferred tax liabilities (DTL)) realizable through net operating loss (NOL) carryback	23		*797*		
DTA's (net of associated DTL's) arising from temporary differences but not realizable through NOL carryback	24		*1,416*		
DTA's (net of associated DTL's) arising from temporary differences but not realizable through NOL carryback exceeding regulatory thresholds	25		–		
Other DTA/DTL adjustments[4]	26		*(631)*		
Significant investments in financials (excluding TD Ameritrade)					
Significant investments exceeding regulatory thresholds	27		*20*		L2
Significant investments not exceeding regulatory thresholds	28		*68*		
Defined pension benefits	29		10		K
Other Assets	30		56,643		
TOTAL ASSETS	31	1,405,442		1,398,194	
LIABILITIES AND EQUITY[5]					
Trading deposits	32	37,796		37,796	
Derivatives	33	53,569		53,569	
Securitization liabilities at fair value	34	12,749		12,749	
Financial liabilities designated at fair value through profit or loss	35	95,774		95,774	
Deposits	36	870,326		870,326	
Other	37	238,250		231,002	
Deferred tax liabilities					
Goodwill	38		*109*		E3
Intangible assets (excluding mortgage servicing rights)	39		*130*		F2
Other deferred tax liabilities (Cash flow hedges and other DTL's)	40		*587*		
Other DTA/DTL adjustments[4]	41		*(631)*		
Gains and losses due to changes in own credit risk on fair value liabilities	42		154		J
Other liabilities	43		230,653		
Subordinated notes and debentures	44	10,596		10,596	
Directly issued qualifying Tier 2 instruments	45		*10,398*		R
Directly issued capital instruments subject to phase out from Tier 2	46		*198*		S
Capital instruments not allowed for regulatory capital	47		–		
Liabilities	48	1,319,060		1,311,812	
Common Shares	49	21,722		21,722	A1
Preferred Shares	50	5,800		5,800	
Directly issued qualifying Additional Tier 1 instruments	51		*5,800*		M
Treasury Shares – Common	52	(44)		(44)	A2
Treasury Shares – Preferred	53	(4)		(4)	
Treasury Shares – non-viability contingent capital (NVCC) Preferred Shares	54		*(4)*		N
Treasury Shares – non-NVCC Preferred Shares	55		–		
Contributed Surplus	56	157		157	
Contributed surplus – Common Shares	57		*156*		B
Contributed surplus – Preferred Shares	58		*1*		O
Retained Earnings	59	48,818		48,818	C
Accumulated other comprehensive income (AOCI)	60	9,933		9,933	D
Cash flow hedges requiring derecognition	61		*606*		H
Net AOCI included as capital	62		*9,327*		
TOTAL LIABILITIES AND EQUITY	63	$ 1,405,442		$ 1,398,194	

[1] As per Balance Sheet on page 12 in the Supplemental Financial Information Package.

[2] Legal entities excluded from the regulatory scope of consolidation included the following insurance subsidiaries: Meloche Monnex Inc. (consolidated), TD Life Insurance Company, and TD Reinsurance (Barbados) Inc. which have total assets included in the consolidated Bank of $7.2 billion and total equity of $1.7 billion, of which $287 million is deducted from CET1, $350 million is deducted from additional Tier 1, and $160 million is deducted from Tier 2 Capital. Cross referenced (L3, Q, U) respectively, to the Capital Position – Basel III on pages 1 and 2.

[3] Cross referenced to the current period on the Capital Position – Basel III on pages 1 to 3.

[4] This adjustment is related to deferred tax assets/liabilities netted for financial accounting purposes.

[5] Included in current cap on additional Tier 1 instruments is $1.2 billion related to TD Capital Trust IV (no longer consolidated as the Bank is not the primary beneficiary of the trust) (P– cross referenced to Capital Position – Basel III on page 1).

Leverage Ratio

($ millions, except as noted) *As at*	Line #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	OSFI Template
Summary comparison of accounting assets vs. leverage ratio exposure measure							
Total consolidated assets as per published financial statements	1	**$ 1,405,442**	$ 1,356,588	$ 1,322,506	$ 1,334,903	$ 1,292,504	1
Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	2	**(6,149)**	(5,970)	(5,963)	(5,800)	(5,981)	2
Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference	3	**(5,341)**	(5,341)	(5,726)	–	–	3
Adjustments for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	4	**–**	–	–	–	–	4
Adjustments for derivative financial instruments	5	**1,423**	13,667	17,107	(7,378)	594	5
Adjustment for securities financing transactions (SFT)	6	**(28,158)**	(25,510)	(22,889)	(19,658)	(16,893)	6
Adjustment for off-balance sheet items (credit equivalent amounts)	7	**160,433**	159,414	152,743	150,910	137,850	7
Other adjustments	8	**(25,986)**	(25,251)	(23,707)	(22,039)	(22,264)	8
Leverage Ratio Exposure	9	**$ 1,501,664**	$ 1,467,597	$ 1,434,071	$ 1,430,938	$ 1,385,810	9
Leverage Ratio Common Disclosure Template							
On-balance sheet exposures							
On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	10	**$ 1,179,069**	$ 1,151,972	$ 1,133,480	$ 1,144,580	$ 1,109,661	1
Gross up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	11	**–**	–	–	–	–	2
Deductions of receivables assets for cash variation margin provided in derivative transactions	12	**(9,244)**	(5,970)	(6,246)	(5,662)	(5,663)	3
Less: Asset amounts deducted in determining Tier 1 Capital	13	**(26,302)**	(25,519)	(23,893)	(21,897)	(21,989)	4
Total on-balance sheet exposures (excluding derivatives and SFTs)	14	**1,143,523**	1,120,483	1,103,341	1,117,021	1,082,009	5
Derivative exposures							
Replacement cost associated with all derivative transactions (such as net of eligible cash variation margin)	15	**18,007**	18,015	21,603	12,381	13,409	6
Add-on amounts for potential future exposure (PFE) associated with all derivative transactions	16	**44,544**	44,573	46,295	42,349	39,885	7
Exempted central counterparty (CCP)-leg of client cleared trade exposures	17	**–**	–	–	–	–	8
Adjusted effective notional amount of written credit derivatives	18	**1,222**	860	1,836	1,121	1,874	9
Adjusted effective notional offsets and add-on deductions for written credit derivatives	19	**(550)**	(187)	(1,288)	(566)	(1,344)	10
Total derivative exposures	20	**63,223**	63,261	68,446	55,285	53,824	11
Securities financing transaction exposures							
Gross SFT assets recognized for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	21	**162,644**	149,949	132,430	127,379	129,019	12
Netted amounts of cash payables and cash receivables of gross SFT assets	22	**(31,170)**	(28,279)	(25,212)	(21,631)	(19,383)	13
Counterparty credit risk (CCR) exposure for SFTs	23	**3,012**	2,769	2,323	1,974	2,491	14
Agent transaction exposures	24	**–**	–	–	–	–	15
Total securities financing transaction exposures	25	**134,486**	124,439	109,541	107,722	112,127	16
Other off-balance sheet exposures							
Off-balance sheet exposure at gross notional amount	26	**580,511**	577,581	555,650	550,977	529,419	17
Adjustments for conversion to credit equivalent amounts	27	**(420,079)**	(418,167)	(402,907)	(400,067)	(391,569)	18
Off-balance sheet items	28	**160,432**	159,414	152,743	150,910	137,850	19
Capital on total exposures							
Tier 1 Capital – "All-in" basis (line 45 on page 1)	29	**61,114**	61,008	59,396	59,735	57,047	20
Total Exposures (sum of lines 14, 20, 25 and 28) – All-in basis	30	**$ 1,501,664**	$ 1,467,597	$ 1,434,071	$ 1,430,938	$ 1,385,810	21
Leverage Ratio	31	**4.1 %**	4.2 %	4.1 %	4.2 %	4.1 %	22

Key Metrics – TLAC Requirements (KM2)

($ millions, except as noted)	Line #	2019 Q3	2019 Q2	2019 Q1	OSFI Template
Resolution group 1					
Total loss absorbing capacity (TLAC) available	1	**$ 85,976**	$ 78,206	$ 70,603	1
Total RWA at the level of the resolution group	2	**454,881**	452,267	439,324	2
TLAC ratio: TLAC as a percentage of RWA (row 1 / row 2) %	3	**18.9 %**	17.3 %	16.1 %	3
Leverage ratio exposure measure at the level of the resolution group	4	**$ 1,501,664**	$ 1,467,597	$ 1,434,071	4
TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure (row 1 / row 4) %	5	**5.7 %**	5.3 %	4.9 %	5
Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	6	**Yes**	Yes	Yes	6a
Does the subordination exemption in the penultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	7	**No**	No	No	6b
If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with Excluded Liabilities and that is recognized as external TLAC, divided by funding issued that ranks pari passu with Excluded Liabilities and that would be recognized as external TLAC if no cap was applied (%)	8	**n/a**	n/a	n/a	6c

TLAC Composition (TLAC1)

($ millions, except as noted)	Line #	2019 Q3	Q2	Q1
Regulatory capital elements of TLAC and adjustments				
Common Equity Tier 1 capital (CET1)	1	**$ 54,478**	$ 54,269	$ 52,668
Additional Tier 1 capital (AT1) before TLAC adjustments	2	**6,636**	6,739	6,728
AT1 ineligible as TLAC as issued out of subsidiaries to third parties	3	**–**	–	–
Other adjustments	4	**–**	–	–
AT1 instruments eligible under the TLAC framework (sum of lines 2 to 4)	5	**6,636**	6,739	6,728
Tier 2 capital (T2) before TLAC adjustments	6	**12,255**	10,612	10,572
Amortized portion of T2 instruments where remaining maturity > 1 year	7	**–**	–	–
T2 capital ineligible as TLAC as issued out of subsidiaries to third parties	8	**–**	–	–
Other adjustments	9	**–**	–	–
T2 instruments eligible under the TLAC framework (sum of lines 6 to 9)	10	**12,255**	10,612	10,572
TLAC arising from regulatory capital (sum of lines 1, 5 and 10)	11	**73,369**	71,620	69,968
Non-regulatory capital elements of TLAC				
External TLAC instruments issued directly by the bank and subordinated to excluded liabilities	12	**n/a**	n/a	n/a
External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements	13	**12,609**	6,587	635
Of which: amount eligible as TLAC after application of the caps	14	***n/a***	*n/a*	*n/a*
External TLAC instruments issued by funding vehicles prior to January 1, 2022	15	**–**	–	–
Eligible ex ante commitments to recapitalize a G-SIB in resolution	16	**n/a**	n/a	n/a
TLAC arising from non-regulatory capital instruments before adjustments (sum of lines 12, 13, 15 and 16)	17	**12,609**	6,587	635
Non-regulatory capital elements of TLAC: adjustments				
TLAC before deductions (sum of lines 11 and 17)	18	**85,978**	78,207	70,603
Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs and D-SIBs)	19	**n/a**	n/a	n/a
Deduction of investments in own other TLAC liabilities	20	**(2)**	(1)	–
Other adjustments to TLAC	21	**–**	–	–
TLAC available after deductions (sum of lines 18 to 21)	22	**85,976**	78,206	70,603
Risk-weighted assets and leverage exposure measure for TLAC purposes				
Total risk-weighted assets adjusted as permitted under the TLAC regime	23	**454,881**	452,267	439,324
Leverage exposure measure	24	**1,501,664**	1,467,597	1,434,071
TLAC ratios and buffers				
TLAC Ratio (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime) (line 22/line 23)	25	**18.9 %**	17.3 %	16.1 %
TLAC Leverage Ratio (as a percentage of leverage exposure) (line 22/line 24)	26	**5.7**	5.3	4.9
CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements[1]	27	**n/a**	n/a	n/a
Institution-specific buffer (capital conservation buffer plus countercyclical buffer plus higher loss absorbency, expressed as a percentage of risk-weighted assets)	28	**3.5 %**	3.5 %	3.5 %
Of which: capital conservation buffer	29	***2.5***	*2.5*	*2.5*
Of which: bank specific countercyclical buffer	30	**–**	–	–
Of which: D-SIB / G-SIB buffer	31	***1.0***	*1.0*	*1.0*

[1] Not applicable until the first quarter of 2022.

Creditor Ranking at Legal Entity Level (TLAC3)

($ millions)	Line	2019 Q3						2019 Q2					
As at	#	Creditor Ranking						Creditor Ranking					
		1	2	3	4	5	Sum of 1 to 5	1	2	3	4	5	Sum of 1 to 5
		(most junior)				(most senior)		(most junior)				(most senior)	
Description of creditor ranking (free text)	1	Common Shares	Preferred shares & Tier 1 notes	Subordinated debts	Bail-in debts[1]	Other liabilities[2]	Sum	Common Shares	Preferred shares & Tier 1 notes	Subordinated debts	Bail-in debts[1]	Other liabilities[2]	Sum
Total capital and liabilities net of credit risk mitigation	2	**21,722**	**5,800**	**10,926**	**12,566**		**51,014**	21,718	5,350	9,207	6,598		42,873
Subset of row 2 that are excluded liabilities	3	**67**	**4**	**128**	**25**		**224**	80	6	23	1		110
Total capital and liabilities less excluded liabilities (row 2 minus row 3)	4	**21,655**	**5,796**	**10,798**	**12,541**		**50,790**	21,638	5,344	9,184	6,597		42,763
Subset of row 4 that are potentially eligible as TLAC	5	**21,655**	**5,796**	**10,798**	**12,541**		**50,790**	21,638	5,344	9,184	6,597		42,763
Subset of row 5 with 1 year ≤ residual maturity < 2 years	6				**930**		**930**				199		199
Subset of row 5 with 2 years ≤ residual maturity < 5 years	7				**9,665**		**9,665**				6,339		6,339
Subset of row 5 with 5 years ≤ residual maturity < 10 years	8			**5,890**	**1,863**		**7,753**			4,428	59		4,487
Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	9			**4,908**	**83**		**4,991**			4,756			4,756
Subset of row 5 that is perpetual securities	10	**21,655**	**5,796**				**27,451**	21,638	5,344				26,982

		2019 Q1					
		Creditor Ranking					
		1	2	3	4	5	Sum of 1 to 5
		(most junior)				(most senior)	
Description of creditor ranking (free text)	11	Common Shares	Preferred shares & Tier 1 notes	Subordinated debts	Bail-in debts[1]	Other liabilities[2]	Sum
Total capital and liabilities net of credit risk mitigation	12	21,661	5,350	9,168	632		36,811
Subset of row 12 that are excluded liabilities	13	153	3	2	–		158
Total capital and liabilities less excluded liabilities (row 12 minus row 13)	14	21,508	5,347	9,166	632		36,653
Subset of row 14 that are potentially eligible as TLAC	15	21,508	5,347	9,166	632		36,653
Subset of row 15 with 1 year ≤ residual maturity < 2 years	16				112		112
Subset of row 15 with 2 years ≤ residual maturity < 5 years	17				494		494
Subset of row 15 with 5 years ≤ residual maturity < 10 years	18			4,448	26		4,474
Subset of row 15 with residual maturity ≥ 10 years, but excluding perpetual securities	19			4,718			4,718
Subset of row 15 that is perpetual securities	20	21,508	5,347				26,855

[1] Consistent with the scope of the Canadian statutory Bail-in Regime, Bail-in Debt is subordinated to Other Liabilities. Under the Bail-in Regime, Bail-in Debt which would ordinarily rank equally to Other Liabilities in liquidation, is subject to conversion under statutory resolution powers whereas Other Liabilities are not subject to such conversion.

[2] Completion of this column is not required by OSFI at this time.

Overview of Risk-Weighted Assets (OV1)[1]

($ millions)	Line	Risk-Weighted Assets (RWA)[2]					Minimum capital requirements[3]					
As at	#	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	OSFI Template
Credit risk (excluding counterparty credit risk) (CCR)	1	**$ 344,213**	$ 342,045	$ 328,625	$ 325,936	$ 319,777	**$ 27,537**	$ 27,364	$ 26,290	$ 26,075	$ 25,582	1
Of which: standardized approach (SA)[4]	2	***163,881***	*163,721*	*162,318*	*160,732*	*157,319*	***13,110***	*13,098*	*12,985*	*12,859*	*12,586*	2
Of which: internal ratings-based (IRB) approach	3	***180,332***	*178,324*	*166,307*	*165,204*	*162,458*	***14,427***	*14,266*	*13,305*	*13,216*	*12,996*	3
Counterparty credit risk	4	**15,193**	14,655	14,388	14,267	13,674	**1,215**	1,172	1,151	1,141	1,094	4
Of which: standardized approach for counterparty credit risk (SA-CCR)	5	***7,290***	*7,358*	*6,974*	*–*	*–*	***583***	*588*	*558*	*–*	*–*	5
Of which: current exposure method (CEM)	6	**–**	–	–	*5,209*	*5,151*	**–**	–	–	*417*	*412*	n/a
Of which: internal model method (IMM)	7	**–**	–	–	–	–	**–**	–	–	–	–	6
Of which: other CCR[5]	8	***7,903***	*7,297*	*7,414*	*9,058*	*8,523*	***632***	*584*	*593*	*724*	*682*	n/a
Equity positions in banking book under market-based approach	9	**–**	–	–	–	–	**–**	–	–	–	–	7
Equity investments in funds – look-through approach	10	**398**	331	299	212	219	**32**	26	24	17	18	8
Equity investments in funds – mandate-based approach	11	**49**	48	46	45	57	**4**	4	4	4	5	9
Equity investments in funds – fall-back approach	12	**538**	375	298	260	217	**43**	30	24	21	17	10
Settlement risk	13	**9**	55	27	124	25	**1**	4	2	10	2	11
Securitization exposures in banking book[6]	14	**11,392**	11,455	10,946	13,520	13,552	**911**	917	876	1,082	1,084	12
Of which: grandfathered	15	***(1,544)***	*(1,544)*	*(1,544)*	*–*	*–*	***(123)***	*(123)*	*(123)*	*–*	*–*	12a
Of which: securitization internal ratings-based approach (SEC-IRBA)	16	**–**	–	–	*9,205*	*9,526*	**–**	–	–	*737*	*762*	13
Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	17	***12,936***	*12,999*	*12,490*	*–*	*–*	***1,034***	*1,040*	*999*	*–*	*–*	14
Of which: securitization standardized approach (SEC-SA)	18	**–**	–	–	*4,315*	*4,026*	**–**	–	–	*345*	*322*	15
Market risk	19	**12,072**	13,028	15,735	13,213	14,670	**966**	1,042	1,259	1,057	1,174	16
Of which: standardized approach (SA)	20	***647***	*574*	*483*	*183*	*163*	***52***	*46*	*39*	*15*	*13*	17
Of which: internal model approaches (IMA)	21	***11,425***	*12,454*	*15,252*	*13,030*	*14,507*	***914***	*996*	*1,220*	*1,042*	*1,161*	18
Operational risk	22	**54,857**	53,959	53,006	52,375	51,250	**4,389**	4,317	4,240	4,190	4,100	19
Of which: basic indicator approach	23	**–**	–	–	–	–	**–**	–	–	–	–	20
Of which: standardized approach	24	**–**	–	–	*4,249*	*4,090*	**–**	–	–	*340*	*327*	21
Of which: advanced measurement approach	25	***54,857***	*53,959*	*53,006*	*48,126*	*47,160*	***4,389***	*4,317*	*4,240*	*3,850*	*3,773*	22
Amounts below the thresholds for deduction (subject to 250% risk weight)	26	**16,160**	16,316	15,954	15,680	15,502	**1,293**	1,305	1,276	1,254	1,239	23
Floor adjustment	27	**–**	–	–	–	–	**–**	–	–	–	–	24
Total (lines 1+4+9+10+11+12+13+14+19+22+26+27)	28	**$ 454,881**	$ 452,267	$ 439,324	$ 435,632	$ 428,943	**$ 36,391**	$ 36,181	$ 35,146	$ 34,851	$ 34,315	25

[1] Prior to fiscal 2019, represents CET1 RWA which includes CVA at 80%.
[2] RWA include 6% scalar when appropriate.
[3] Minimum capital requirements equal 8% of RWA.
[4] Includes other assets and equities which use a regulatory prescribed risk weight.
[5] Includes qualifying central counterparties (QCCPs), CVA and repo style transactions.
[6] Prior to implementation of the new securitization framework as of the first quarter of 2019, the lines for SEC-IRBA represented IRB-RBA (including IAA), SEC-ERBA and IAA represented IRB-SFA and SEC-SA represented SA/SSFA.

Flow Statements for Risk-Weighted Assets – Credit Risk

($ millions) *As at*	LINE #	2019 Q3 Non-counterparty credit risk[1]	2019 Q3 Of which internal rating-based(IRB) approach[2]	2019 Q3 Counterparty credit risk[3]	2019 Q3 Of which IRB approach	2019 Q2 Non-counterparty credit risk[1]	2019 Q2 Of which internal rating-based(IRB) approach[2]	2019 Q2 Counterparty credit risk[3]	2019 Q2 Of which IRB approach
RWA, balance at beginning of period	1	**$ 370,625**	**$ 178,324**	**$ 14,655**	**$ 9,217**	$ 356,195	$ 166,307	$ 14,388	$ 8,612
Asset size[4]	2	**7,501**	**3,709**	**989**	**96**	5,226	3,098	76	600
Asset quality[5]	3	**(503)**	**(503)**	**(199)**	**(128)**	1,958	1,957	36	24
Model updates[6]	4	**(123)**	**(123)**	**–**	**–**	2,162	6,114	–	–
Methodology and policy[7]	5	**–**	**–**	**–**	**–**	–	–	–	–
Acquisitions and disposals	6	**–**	**–**	**–**	**–**	–	–	–	–
Foreign exchange movements[8]	7	**(3,693)**	**(1,075)**	**(252)**	**(146)**	4,637	848	155	(19)
Other[9]	8	**(1,048)**	**–**	**–**	**–**	447	–	–	–
RWA, balance at end of period	9	**$ 372,759**	**$ 180,332**	**$ 15,193**	**$ 9,039**	$ 370,625	$ 178,324	$ 14,655	$ 9,217

		2019 Q1 Non-counterparty credit risk[1]	2019 Q1 Of which internal rating-based(IRB) approach[2]	2019 Q1 Counterparty credit risk[3]	2019 Q1 Of which IRB approach	2018 Q4 Non-counterparty credit risk[1]	2018 Q4 Of which internal rating-based(IRB) approach[2]	2018 Q4 Counterparty credit risk[3]	2018 Q4 Of which IRB approach
RWA, balance at beginning of period	10	$ 355,777	$ 165,204	$ 14,267	$ 6,878	$ 349,350	$ 162,458	$ 13,673	$ 6,694
Asset size[4]	11	(307)	1,121	(662)	(228)	3,857	2,585	535	154
Asset quality[5]	12	(299)	(299)	(27)	(18)	(701)	(701)	24	16
Model updates[6]	13	368	368	–	–	131	131	–	–
Methodology and policy[7]	14	–	–	767	2,000	–	–	–	–
Acquisitions and disposals	15	288	3	–	–	–	–	–	–
Foreign exchange movements[8]	16	(417)	(90)	43	(20)	2,750	731	35	14
Other[9]	17	785	–	–	–	390	–	–	–
RWA, balance at end of period	18	$ 356,195	$ 166,307	$ 14,388	$ 8,612	$ 355,777	$ 165,204	$ 14,267	$ 6,878

		2018 Q3 Non-counterparty credit risk[1]	2018 Q3 Counterparty credit risk[3]
RWA, balance at beginning of period	19	$ 338,523	$ 13,656
Asset size[4]	20	4,613	177
Asset quality[5]	21	(1,033)	(224)
Model updates[6]	22	4,784	–
Methodology and policy[7]	23	–	–
Acquisitions and disposals	24	(447)	–
Foreign exchange movements[8]	25	2,922	64
Other[9]	26	(12)	–
RWA, balance at end of period	27	$ 349,350	$ 13,673

[1] Non-counterparty credit risk includes loans and advances to individuals and small business retail customers, wholesale and commercial corporate customers, and banks and governments, as well as holdings of debt, equity securities, and other assets including prepaid expenses, deferred income taxes, land, building, equipment, and other depreciable property.
[2] Reflects Pillar 3 requirements for RWA flow statements of credit risk exposures under IRB (CR8) which excludes securitization and equity.
[3] CCR is comprised of over-the-counter (OTC) derivatives, repo-style transactions, trades cleared through central counterparties, and fully phased-in CVA RWA. In fiscal 2018, CVA RWA was phased in at 80%.
[4] The Asset size category consists of organic changes in book size and composition (including new business and maturing loans), and for the third quarter of 2019, increased due to growth in various portfolios in the Canadian Retail, U.S. Retail, and Wholesale Banking segments.
[5] The Asset quality category includes quality of book changes caused by experience such as underlying customer behaviour or demographics, including changes through model calibrations/realignments and in the third quarter of 2019, decreased mainly due to savings from the annual update of non-retail credit risk parameters.
[6] The Model updates category relates to model implementation, changes in model scope, or any changes to address model malfunctions.
[7] The Methodology and policy category impacts reflect newly adopted methodology changes to the calculations driven by regulatory policy changes, such as new regulations.
[8] Foreign exchange movements are mainly due to a change in the U.S. dollar foreign exchange rate for the U.S. portfolios in the U.S. Retail and Wholesale Banking segments.
[9] The Other category consists of items not described in the above categories, including changes in exposures not included under advanced or standardized methodologies, such as prepaid expenses, deferred income taxes, land, building, equipment and other depreciable property, and other assets.

Flow Statements for Risk-Weighted Assets – Market Risk

($ millions) *As at*	LINE #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3
RWA, balance at beginning of period	1	**$ 13,028**	$ 15,735	$ 13,213	$ 14,670	$ 15,248
Movement in risk levels[1]	2	**94**	(2,197)	2,522	(1,457)	(578)
Model updates/changes[2]	3	**(1,050)**	(510)	–	–	–
Methodology and policy[3]	4	**–**	–	–	–	–
Acquisitions and disposals	5	**–**	–	–	–	–
Foreign exchange movements and other[4]	6	**n/m[5]**	n/m	n/m	n/m	n/m
RWA, balance at end of period	7	**$ 12,072**	$ 13,028	$ 15,735	$ 13,213	$ 14,670

[1] The Movement in risk levels category reflects changes in risk due to position changes and market movements.
[2] The Model updates category reflects updates to the model to reflect recent experience and change in model scope. Improvements in the data quality drove the changes in the model results.
[3] The Methodology and policy category reflects newly adopted methodology changes to the calculations driven by regulatory policy changes.
[4] Foreign exchange movements and other are deemed not meaningful since RWA exposure measures are calculated in Canadian dollars. Therefore, no foreign exchange translation is required.
[5] Not meaningful.

Flow Statement for Risk-Weighted Assets – Operational Risk

($ millions) *As at*	LINE #	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3
Disclosure for Operational Risk Risk-Weighted Assets Movement by Key Driver						
RWA, balance at beginning of period	1	**$ 53,959**	$ 53,006	$ 52,375	$ 51,250	$ 50,392
Revenue generation[1]	2	**–**	–	–	159	263
Movement in risk levels[2]	3	**1,315**	412	2,417	706	312
Model updates[3]	4	**–**	–	(1,739)	–	–
Methodology and policy[4]	5	**–**	–	–	–	–
Acquisitions and disposals	6	**–**	–	–	–	–
Foreign exchange movements and other[5]	7	**(417)**	541	(47)	260	283
RWA, balance at end of period	8	**$ 54,857**	$ 53,959	$ 53,006	$ 52,375	$ 51,250

[1] The movement in the Revenue generation category is due to a change in gross income.
[2] The Movement in risk levels category primarily reflects changes in risk due to operational loss experience, business environment, internal control factors, and scenario analysis.
[3] The Model updates category relates to model implementation, changes in model scope, or any changes to address model malfunctions. Entities that were previously reported under TSA have been transitioned to the advanced measurement approach effective the first quarter of 2019.
[4] The Methodology and policy category reflects newly adopted methodology changes to the calculations driven by regulatory policy changes.
[5] Foreign exchange movements are mainly due to a change in the U.S. dollar foreign exchange rate for the U.S. portfolios in the U.S. Retail segment.

Differences Between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statements with Regulatory Risk Categories (LI1)

($ millions) *As at*	LINE #	2019 Q3						
				Carrying values of items[1]				
		Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation[2]	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets								
Cash and due from banks	1	$ 5,012	$ 5,012	$ 5,294	$ –	$ –	$ –	$ (282)
Interest-bearing deposits with banks	2	34,697	34,646	34,516	–	–	130	–
Trading loans, securities, and other	3	142,161	142,161	64	–	–	139,954	2,143
Non-trading financial assets at fair value through profit or loss	4	6,033	5,510	1,337	–	4,617	–	(444)
Derivatives	5	52,555	52,555	–	52,555	–	49,642	–
Financial assets designated at fair value through profit or loss	6	4,018	1,730	1,730	–	–	–	–
Financial assets at fair value through other comprehensive income	7	116,700	114,625	97,074	–	17,364	–	187
Debt securities at amortized cost, net of allowance for credit losses	8	116,390	116,156	74,591	–	41,626	–	(61)
Securities purchased under reverse repurchase agreements	9	162,644	162,644	–	162,644	–	2,860	–
Residential mortgages	10	231,349	231,349	231,401	–	–	–	(52)
Consumer instalment and other personal	11	178,222	178,222	177,513	–	–	–	709
Credit card	12	36,756	36,756	32,217	–	–	–	4,539
Business and government	13	233,374	233,374	224,035	–	9,498	–	(159)
Allowance for loan losses	14	(3,769)	(3,769)	(148)	–	–	–	(3,621)
Customers' liability under acceptances	15	15,219	15,219	15,219	–	–	–	–
Investment in TD Ameritrade	16	9,108	9,108	–	–	–	–	9,108
Goodwill	17	17,006	17,006	–	–	–	–	17,006
Other intangibles	18	2,565	2,565	–	–	–	–	2,565
Land, buildings, equipment, and other depreciable assets	19	5,463	5,405	5,405	–	–	–	–
Deferred tax assets	20	1,898	1,803	1,773	–	–	–	30
Amounts receivable from brokers, dealers and clients	21	21,169	21,169	740	–	–	–	20,429
Other assets	22	16,872	14,948	5,134	9,239	360	–	215
Total assets	23	$ 1,405,442	$ 1,398,194	$ 907,895	$ 224,438	$ 73,465	$ 192,586	$ 52,312
Liabilities								
Trading deposits	24	$ 37,796	$ 37,796	$ –	$ –	$ –	$ 9,470	$ 28,326
Derivatives	25	53,569	53,569	–	53,569	–	48,685	–
Securitization liabilities at fair value	26	12,749	12,749	–	–	–	12,749	–
Financial liabilities designated at fair value through profit or loss	27	95,774	95,774	–	–	–	5	95,769
Deposits	28	870,326	870,326	–	–	–	–	870,326
Acceptances	29	15,219	15,219	–	–	–	–	15,219
Obligations related to securities sold short	30	35,299	35,299	–	–	–	33,863	1,436
Obligations related to securities sold under repurchase agreements	31	123,208	123,208	–	123,208	–	1,447	–
Securitization liabilities at amortized cost	32	14,179	14,179	–	–	–	–	14,179
Amounts payable to brokers, dealers, and clients	33	21,866	21,866	–	–	–	–	21,866
Insurance-related liabilities	34	6,792	23	–	–	–	–	23
Other liabilities	35	21,687	21,208	–	–	–	–	21,208
Subordinated notes and debentures	36	10,596	10,596	–	–	–	–	10,596
Total liabilities	37	$ 1,319,060	$ 1,311,812	$ –	$ 176,777	$ –	$ 106,219	$ 1,078,948

[1] Certain exposures may be included in more than one column if subject to both credit and market risk.
[2] Excludes assets and liabilities of insurance subsidiaries.

Main Sources of Differences Between Regulatory Exposure Amounts and Carrying Values in Financial Statements (LI2)

($ millions) *As at*	LINE #	2019 Q3				
			Items subject to			
		Total	Credit risk framework	Counterparty credit risk framework[1]	Securitization framework	Market risk framework
Asset carrying value amount under scope of regulatory consolidation	1	$ 1,398,384	$ 907,895	$ 224,438	$ 73,465	$ 192,586
Liabilities carrying value amount under regulatory scope of consolidation	2	282,996	–	176,777	–	106,219
Total net amount under regulatory scope of consolidation	3	1,115,388	907,895	47,661	73,465	86,367
Off-balance sheet amounts	4	292,690	271,122	–	21,568	–
Differences due to different netting rules, other than those already included in line 2	5	33,964	–	33,964	–	–
Adjustment for derivatives and PFE	6	54,413	–	54,413	–	–
Gross up for repo-style transactions	7	246,415	–	246,415	–	–
Exposure amounts considered for regulatory purposes	8	$ 1,742,870	$ 1,179,017	$ 382,453	$ 95,033	$ 86,367

[1] Collateral for repo-style transactions is reflected in the loss given default (LGD) as opposed to exposure at default (EAD).

Credit Quality of Assets (CR1)[1,2]

($ millions) As at	LINE #	2019 Q3 Gross carrying values of: Defaulted exposures[3]	Non-defaulted exposures	Allowances/ impairments[4]	Net values	2019 Q2 Gross carrying values of: Defaulted exposures[3]	Non-defaulted exposures	Allowances/ impairments[4]	Net values
Loans	1	**$ 2,945**	**$ 679,068**	**$ (3,755)**	**$ 678,258**	$ 3,296	$ 668,876	$ (3,762)	$ 668,410
Debt securities	2	**–**	**168,389**	**(1)**	**168,388**	–	168,920	(1)	168,919
Off-balance sheet exposures	3	**101**	**492,987**	**(1,085)**	**492,003**	–	491,731	(1,105)	490,626
Total	4	**$ 3,046**	**$ 1,340,444**	**$ (4,841)**	**$ 1,338,649**	$ 3,296	$ 1,329,527	$ (4,868)	$ 1,327,955

		2019 Q1 Gross carrying values of: Defaulted exposures[3]	Non-defaulted exposures	Allowances/ impairments[4]	Net values	2018 Q4 Gross carrying values of: Defaulted exposures[3]	Non-defaulted exposures	Allowances/ impairments[4]	Net values
Loans	5	$ 3,534	$ 654,217	$ (3,713)	$ 654,038	$ 3,154	$ 652,241	$ (3,531)	$ 651,864
Debt securities	6	–	166,316	(1)	166,315	–	169,461	–	169,461
Off-balance sheet exposures	7	–	480,440	(1,069)	479,371	–	478,016	(1,029)	476,987
Total	8	$ 3,534	$ 1,300,973	$ (4,783)	$ 1,299,724	$ 3,154	$ 1,299,718	$ (4,560)	$ 1,298,312

Excludes insurance subsidiaries, securitization exposures, assets at fair value through profit or loss, and acquired credit-impaired loans.

[2] Restructured exposures as at July 31, 2019 are $1,106 million (April 30, 2019 are $1,129 million; January 31, 2019 – $1,091 million; October 31, 2018 – $1,089 million), of which $582 million (April 30, 2019 – $619 million; January 31, 2019 – $868 million; October 31, 2018 – $879 million) is considered impaired.

[3] Includes total impaired exposures, of which $1,704 million as at July 31, 2019 (April 30, 2019 – $1,978 million; January 31, 2019 – $1,656 million; October 31, 2018 – $1,590 million) is in the default category and $1,241 million as at July 31, 2019 (April 30, 2019 – $1,318 million; January 31, 2019 – $1,878 million; October 31, 2018 – $1,564 million) is in the high risk/watch and classified categories.

[4] Includes Stage 1, 2, and 3 allowances.

Credit Risk Mitigation Techniques – Overview (CR3)[1]

($ millions) As at	LINE #	2019 Q3 Exposures unsecured carrying amount	Exposures secured	Exposures secured by collateral[2]	Exposures secured by financial guarantees	Exposures secured by credit derivatives[3]	2019 Q2 Exposures unsecured carrying amount	Exposures secured	Exposures secured by collateral[2]	Exposures secured by financial guarantees	Exposures secured by credit derivatives[3]
Loans	1	**$ 248,287**	**$ 433,726**	**$ 317,273**	**$ 116,453**	**$ –**	$ 245,427	$ 426,745	$ 308,182	$ 118,563	$ –
Debt securities	2	**166,734**	**1,655**	**–**	**49**	**1,606**	167,173	1,747	–	65	1,682
Total	3	**$ 415,021**	**$ 435,381**	**$ 317,273**	**$ 116,502**	**$ 1,606**	$ 412,600	$ 428,492	$ 308,182	$ 118,628	$ 1,682
Of which: defaulted	4	***1,420***	***1,525***	***1,274***	***251***	**–**	*1,755*	*1,541*	*1,292*	*249*	–

		2019 Q1 Exposures unsecured carrying amount	Exposures secured	Exposures secured by collateral[2]	Exposures secured by financial guarantees	Exposures secured by credit derivatives[3]	2018 Q4 Exposures unsecured carrying amount	Exposures secured	Exposures secured by collateral[2]	Exposures secured by financial guarantees	Exposures secured by credit derivatives[3]
Loans	5	$ 235,941	$ 421,810	$ 301,249	$ 120,561	$ –	$ 233,061	$ 422,334	$ 299,846	$ 122,488	$ –
Debt securities	6	164,431	1,885	–	76	1,809	167,768	1,693	–	91	1,602
Total	7	$ 400,372	$ 423,695	$ 301,249	$ 120,637	$ 1,809	$ 400,829	$ 424,027	$ 299,846	$ 122,579	$ 1,602
Of which: defaulted	8	*2,007*	*1,527*	*1,286*	*241*	–	*1,622*	*1,532*	*1,307*	*225*	–

[1] Represent collateral, financial guarantees and credit derivatives only when such result in reduced capital requirements.

[2] For retail exposures reflects collateral as at origination and for non-retail only reflects financial collateral.

[3] As at July 31, 2019, the impact to RWA from credit derivatives used as CRM techniques is a decrease of $1.5 billion (April 30, 2019 – a decrease of $1.4 billion; January 31, 2019 – a decrease of $1.3 billion; October 31, 2018 – a decrease of $1.3 billion) (CR7).

Gross Credit Risk Exposures[1]

($ millions) As at	LINE #	2019 Q3 Drawn	Undrawn[2]	Repo-style transactions	OTC derivatives	Other off-balance sheet	Total	2019 Q2 Drawn	Undrawn[2]	Repo-style transactions	OTC derivatives	Other off-balance sheet	Total
By Counterparty Type													
Retail													
Residential secured	1	$ 332,529	$ 52,908	$ –	$ –	$ –	$ 385,437	$ 326,839	$ 53,074	$ –	$ –	$ –	$ 379,913
Qualifying revolving retail	2	36,562	94,734	–	–	–	131,296	36,060	94,279	–	–	–	130,339
Other retail	3	84,657	7,003	–	–	36	91,696	82,351	6,891	–	–	41	89,283
	4	453,748	154,645	–	–	36	608,429	445,250	154,244	–	–	41	599,535
Non-retail													
Corporate	5	216,474	85,178	186,707	19,383	16,903	524,645	214,622	84,558	181,736	18,638	16,157	515,711
Sovereign	6	189,659	1,460	30,735	13,072	1,797	236,723	186,351	1,304	35,073	14,837	2,760	240,325
Bank	7	23,234	5,052	93,398	17,215	4,681	143,580	24,830	5,108	80,509	16,093	4,606	131,146
	8	429,367	91,690	310,840	49,670	23,381	904,948	425,803	90,970	297,318	49,568	23,523	887,182
Total	9	$ 883,115	$ 246,335	$ 310,840	$ 49,670	$ 23,417	$ 1,513,377	$ 871,053	$ 245,214	$ 297,318	$ 49,568	$ 23,564	$ 1,486,717
By Country of Risk													
Canada	10	$ 489,421	$ 142,642	$ 122,899	$ 13,831	$ 8,613	$ 777,406	$ 481,966	$ 141,505	$ 117,722	$ 14,499	$ 9,312	$ 765,004
United States	11	337,621	99,913	100,872	14,378	13,578	566,362	330,155	100,028	99,442	14,429	13,285	557,339
Other International													
Europe	12	36,757	2,901	71,258	16,827	671	128,414	38,742	2,835	67,230	15,053	738	124,598
Other	13	19,316	879	15,811	4,634	555	41,195	20,190	846	12,924	5,587	229	39,776
	14	56,073	3,780	87,069	21,461	1,226	169,609	58,932	3,681	80,154	20,640	967	164,374
Total	15	$ 883,115	$ 246,335	$ 310,840	$ 49,670	$ 23,417	$ 1,513,377	$ 871,053	$ 245,214	$ 297,318	$ 49,568	$ 23,564	$ 1,486,717
By Residual Contractual Maturity													
Within 1 year	16	$ 290,859	$ 170,703	$ 310,788	$ 26,977	$ 10,172	$ 809,499	$ 286,220	$ 171,894	$ 297,318	$ 25,959	$ 10,723	$ 792,114
Over 1 year to 5 years	17	403,405	72,911	52	12,484	12,296	501,148	402,177	70,865	–	13,445	11,819	498,306
Over 5 years	18	188,851	2,721	–	10,209	949	202,730	182,656	2,455	–	10,164	1,022	196,297
Total	19	$ 883,115	$ 246,335	$ 310,840	$ 49,670	$ 23,417	$ 1,513,377	$ 871,053	$ 245,214	$ 297,318	$ 49,568	$ 23,564	$ 1,486,717
Non-Retail Exposures by Industry Sector													
Real estate													
Residential	20	$ 26,040	$ 2,477	$ 1	$ 236	$ 1,421	$ 30,175	$ 25,597	$ 2,192	$ 1	$ 142	$ 1,443	$ 29,375
Non-residential	21	40,630	6,050	10	1,136	474	48,300	39,599	5,655	10	748	414	46,426
Total real-estate	22	66,670	8,527	11	1,372	1,895	78,475	65,196	7,847	11	890	1,857	75,801
Agriculture	23	7,514	360	5	35	22	7,936	7,426	335	5	36	21	7,823
Automotive	24	12,360	5,834	14	789	93	19,090	12,894	5,628	41	896	95	19,554
Financial	25	34,366	14,116	276,043	27,190	1,821	353,536	34,635	14,118	258,393	25,513	1,672	334,331
Food, beverage, and tobacco	26	6,165	3,330	–	494	491	10,480	6,051	3,505	–	405	498	10,459
Forestry	27	1,336	756	–	26	59	2,177	1,547	640	–	36	51	2,274
Government, public sector entities, and education	28	203,915	4,638	31,382	13,786	6,239	259,960	200,179	4,466	35,493	15,595	7,016	262,749
Health and social services	29	18,542	2,982	150	234	2,998	24,906	18,616	2,976	145	192	2,970	24,899
Industrial construction and trade contractors	30	4,627	1,695	79	38	997	7,436	4,501	1,654	85	28	339	6,607
Metals and mining	31	4,268	3,269	145	396	735	8,813	4,151	3,360	164	320	783	8,778
Pipelines, oil, and gas	32	8,568	12,013	1,208	1,339	1,399	24,527	7,816	12,609	674	1,534	1,461	24,094
Power and utilities	33	5,480	7,196	9	646	2,967	16,298	5,179	6,983	10	528	2,995	15,695
Professional and other services	34	15,035	5,321	771	367	980	22,474	15,382	5,618	785	304	942	23,031
Retail sector	35	6,960	2,986	238	119	211	10,514	7,263	2,907	254	96	221	10,741
Sundry manufacturing and wholesale	36	10,515	7,613	112	424	518	19,182	10,639	7,364	65	500	442	19,010
Telecommunications, cable, and media	37	5,809	6,246	–	800	407	13,262	6,837	6,484	–	906	563	14,790
Transportation	38	12,212	2,123	34	816	1,094	16,279	12,573	2,071	36	728	1,149	16,557
Other	39	5,025	2,685	639	799	455	9,603	4,918	2,405	1,157	1,061	448	9,989
Total	40	$ 429,367	$ 91,690	$ 310,840	$ 49,670	$ 23,381	$ 904,948	$ 425,803	$ 90,970	$ 297,318	$ 49,568	$ 23,523	$ 887,182

[1] Gross credit risk exposure is before credit risk mitigants. This table excludes securitization, equity, and other credit RWA.
[2] Gross exposure on undrawn commitments is EAD which is the amount currently undrawn but expected to be drawn assuming a default on the underlying committed loan agreement.

Gross Credit Risk Exposures (Continued)[1]

($ millions) As at	LINE #	2019 Q1 Drawn	Undrawn[2]	Repo-style transactions	OTC derivatives	Other off-balance sheet	Total	2018 Q4 Drawn	Undrawn[2]	Repo-style transactions	OTC derivatives	Other off-balance sheet	Total
By Counterparty Type													
Retail													
Residential secured	1	$ 323,751	$ 52,451	$ –	$ –	$ –	$ 376,202	$ 322,384	$ 52,157	$ –	$ –	$ –	$ 374,541
Qualifying revolving retail	2	30,408	81,852	–	–	–	112,260	30,549	81,839	–	–	–	112,388
Other retail	3	85,950	6,795	–	–	38	92,783	86,488	6,821	–	–	39	93,348
	4	440,109	141,098	–	–	38	581,245	439,421	140,817	–	–	39	580,277
Non-retail													
Corporate	5	209,135	81,639	160,675	15,899	16,441	483,789	206,808	81,706	160,300	12,995	16,972	478,781
Sovereign	6	186,752	1,340	31,872	16,127	2,678	238,769	187,848	1,686	23,750	16,556	2,522	232,362
Bank	7	27,354	5,033	64,434	18,564	4,328	119,713	28,279	3,648	71,704	20,600	4,083	128,314
	8	423,241	88,012	256,981	50,590	23,447	842,271	422,935	87,040	255,754	50,151	23,577	839,457
Total	9	$ 863,350	$ 229,110	$ 256,981	$ 50,590	$ 23,485	$ 1,423,516	$ 862,356	$ 227,857	$ 255,754	$ 50,151	$ 23,616	$ 1,419,734
By Country of Risk													
Canada	10	$ 474,051	$ 128,932	$ 99,799	$ 12,366	$ 9,683	$ 724,831	$ 475,068	$ 128,554	$ 105,967	$ 16,295	$ 10,005	$ 735,889
United States	11	324,966	96,978	81,646	17,386	12,702	533,678	321,669	96,228	78,277	14,869	12,491	523,534
Other International													
Europe	12	42,489	2,354	60,535	15,620	729	121,727	42,309	2,410	59,569	15,731	772	120,791
Other	13	21,844	846	15,001	5,218	371	43,280	23,310	665	11,941	3,256	348	39,520
	14	64,333	3,200	75,536	20,838	1,100	165,007	65,619	3,075	71,510	18,987	1,120	160,311
Total	15	$ 863,350	$ 229,110	$ 256,981	$ 50,590	$ 23,485	$ 1,423,516	$ 862,356	$ 227,857	$ 255,754	$ 50,151	$ 23,616	$ 1,419,734
By Residual Contractual Maturity													
Within 1 year	16	$ 289,140	$ 158,058	$ 256,981	$ 27,207	$ 9,784	$ 741,170	$ 278,652	$ 157,706	$ 255,754	$ 24,528	$ 9,862	$ 726,502
Over 1 year to 5 years	17	397,921	68,605	–	13,240	12,811	492,577	398,292	67,372	–	17,671	12,856	496,191
Over 5 years	18	176,289	2,447	–	10,143	890	189,769	185,412	2,779	–	7,952	898	197,041
Total	19	$ 863,350	$ 229,110	$ 256,981	$ 50,590	$ 23,485	$ 1,423,516	$ 862,356	$ 227,857	$ 255,754	$ 50,151	$ 23,616	$ 1,419,734
Non-Retail Exposures by Industry Sector													
Real estate													
Residential	20	$ 25,080	$ 2,795	$ 1	$ 89	$ 1,426	$ 29,391	$ 24,953	$ 2,676	$ 1	$ 27	$ 1,510	$ 29,167
Non-residential	21	38,440	5,321	20	669	417	44,867	37,395	5,055	21	197	423	43,091
Total real-estate	22	63,520	8,116	21	758	1,843	74,258	62,348	7,731	22	224	1,933	72,258
Agriculture	23	7,184	399	5	28	20	7,636	6,902	351	2	19	21	7,295
Automotive	24	11,976	5,103	2	965	89	18,135	11,824	4,865	8	758	94	17,549
Financial	25	37,446	13,363	208,454	26,164	1,686	287,113	40,526	12,214	217,998	27,685	1,626	300,049
Food, beverage, and tobacco	26	5,659	3,120	–	373	497	9,649	5,635	3,334	–	435	506	9,910
Forestry	27	1,363	755	–	25	49	2,192	1,234	852	–	12	46	2,144
Government, public sector entities, and education	28	200,045	4,288	32,351	16,780	6,386	259,850	201,188	4,268	24,164	17,338	6,443	253,401
Health and social services	29	18,163	2,165	286	169	2,081	22,864	18,010	1,956	312	52	2,075	22,405
Industrial construction and trade contractors	30	4,543	1,416	59	21	395	6,434	4,163	1,478	63	5	540	6,249
Metals and mining	31	4,000	3,461	90	427	754	8,732	3,988	3,363	102	279	969	8,701
Pipelines, oil, and gas	32	7,563	11,945	1,140	1,348	2,190	24,186	6,914	11,490	85	1,084	2,115	21,688
Power and utilities	33	5,440	7,586	22	501	3,730	17,279	5,977	7,858	7	291	3,693	17,826
Professional and other services	34	15,181	5,200	782	291	909	22,363	14,115	5,523	183	88	810	20,719
Retail sector	35	6,764	2,999	307	91	230	10,391	6,882	2,926	293	40	260	10,401
Sundry manufacturing and wholesale	36	10,152	7,587	27	513	434	18,713	10,160	6,678	21	354	643	17,856
Telecommunications, cable, and media	37	6,426	5,898	–	719	560	13,603	6,302	7,622	–	700	424	15,048
Transportation	38	12,460	2,059	52	632	1,151	16,354	11,459	2,181	66	508	1,107	15,321
Other	39	5,356	2,552	13,383	785	443	22,519	5,308	2,350	12,428	279	272	20,637
Total	40	$ 423,241	$ 88,012	$ 256,981	$ 50,590	$ 23,447	$ 842,271	$ 422,935	$ 87,040	$ 255,754	$ 50,151	$ 23,577	$ 839,457

[1] Gross credit risk exposure is before credit risk mitigants. This table excludes securitization, equity, and other credit RWA.
[2] Gross exposure on undrawn commitments is EAD which is the amount currently undrawn but expected to be drawn assuming a default on the underlying committed loan agreement.

Gross Credit Risk Exposures (Continued)[1]

($ millions) *As at*	LINE #	2018 Q3					
		Drawn	Undrawn[2]	Repo-style transactions	OTC derivatives	Other off-balance sheet	Total
By Counterparty Type							
Retail							
Residential secured	1	$ 315,828	$ 51,315	$ –	$ –	$ –	$ 367,143
Qualifying revolving retail	2	29,884	79,968	–	–	–	109,852
Other retail	3	85,209	6,648	–	–	43	91,900
	4	430,921	137,931	–	–	43	568,895
Non-retail							
Corporate	5	201,554	80,248	166,020	11,040	16,186	475,048
Sovereign	6	187,923	1,422	28,719	14,698	1,771	234,533
Bank	7	27,737	3,253	64,610	18,210	3,445	117,255
	8	417,214	84,923	259,349	43,948	21,402	826,836
Total	9	$ 848,135	$ 222,854	$ 259,349	$ 43,948	$ 21,445	$ 1,395,731
By Country of Risk							
Canada	10	$ 464,056	$ 126,098	$ 102,418	$ 12,540	$ 9,244	$ 714,356
United States	11	321,709	93,217	80,462	14,148	11,278	520,814
Other International							
Europe	12	42,928	2,900	60,758	14,082	741	121,409
Other	13	19,442	639	15,711	3,178	182	39,152
	14	62,370	3,539	76,469	17,260	923	160,561
Total	15	$ 848,135	$ 222,854	$ 259,349	$ 43,948	$ 21,445	$ 1,395,731
By Residual Contractual Maturity							
Within 1 year	16	$ 276,203	$ 155,494	$ 259,349	$ 19,808	$ 10,059	$ 720,913
Over 1 year to 5 years	17	398,881	64,869	–	16,996	10,463	491,209
Over 5 years	18	173,051	2,491	–	7,144	923	183,609
Total	19	$ 848,135	$ 222,854	$ 259,349	$ 43,948	$ 21,445	$ 1,395,731
Non-Retail Exposures by Industry Sector							
Real estate							
Residential	20	$ 24,487	$ 2,668	$ 1	$ 29	$ 1,548	$ 28,733
Non-residential	21	36,888	4,823	16	221	372	42,320
Total real-estate	22	61,375	7,491	17	250	1,920	71,053
Agriculture	23	6,710	342	3	15	21	7,091
Automotive	24	11,360	5,353	2	661	90	17,466
Financial	25	38,293	11,624	217,480	23,503	1,537	292,437
Food, beverage, and tobacco	26	5,653	3,283	–	336	523	9,795
Forestry	27	1,232	798	–	8	49	2,087
Government, public sector entities, and education	28	201,063	3,653	29,279	15,588	5,077	254,660
Health and social services	29	17,439	1,570	316	58	1,979	21,362
Industrial construction and trade contractors	30	4,052	1,498	44	5	778	6,377
Metals and mining	31	3,865	3,248	98	313	1,003	8,527
Pipelines, oil, and gas	32	6,693	11,368	27	1,231	1,662	20,981
Power and utilities	33	5,725	7,401	24	289	3,493	16,932
Professional and other services	34	14,720	5,237	147	95	822	21,021
Retail sector	35	6,142	2,962	307	35	232	9,678
Sundry manufacturing and wholesale	36	9,749	6,481	14	294	603	17,141
Telecommunications, cable, and media	37	6,776	8,290	–	658	425	16,149
Transportation	38	11,467	2,073	64	331	1,017	14,952
Other	39	4,900	2,251	11,527	278	171	19,127
Total	40	$ 417,214	$ 84,923	$ 259,349	$ 43,948	$ 21,402	$ 826,836

[1] Gross credit risk exposure is before credit risk mitigants. This table excludes securitization, equity, and other credit RWA.
[2] Gross exposure on undrawn commitments is EAD which is the amount currently undrawn but expected to be drawn assuming a default on the underlying committed loan agreement.

Standardized Approach – Credit Risk Exposure and Credit Risk Mitigation (CRM) Effects (CR4)[1]

($ millions) As at	LINE #	2019 Q3						2019 Q2					
		Exposures before CCF[2] and CRM		Exposures post-CCF and CRM				Exposures before CCF and CRM		Exposures post-CCF and CRM			
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA[3]	RWA density[4]	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA[3]	RWA density[4]
Asset classes													
Corporate	1	**$ 104,957**	**$ 60,445**	**$ 104,957**	**$ 30,207**	**$ 124,539**	**92.14 %**	$ 105,530	$ 60,357	$ 105,530	$ 29,880	$ 124,579	92.00 %
Sovereign	2	**100,428**	**290**	**100,428**	**145**	**7,984**	**7.94**	96,952	320	96,952	161	7,506	7.73
Bank	3	**12,185**	**8,358**	**12,185**	**5,715**	**3,580**	**20.00**	13,040	8,338	13,040	5,675	3,743	20.00
Retail residential mortgages	4	**3,669**	**852**	**3,669**	**372**	**2,047**	**50.66**	3,166	762	3,166	346	1,793	51.05
Other retail	5	**8,083**	**43,042**	**8,083**	**174**	**5,904**	**71.50**	7,640	45,562	7,640	177	5,508	70.46
Equity	6	**4,515**	**2,753**	**4,515**	**1,377**	**4,051**	**68.75**	4,548	2,811	4,548	1,406	4,078	68.49
Other assets[5]	7	**19,927**	**–**	**19,927**	**–**	**15,776**	**79.17**	19,395	–	19,395	–	16,514	85.15
Total	8	**$ 253,764**	**$ 115,740**	**$ 253,764**	**$ 37,990**	**$ 163,881**	**56.17 %**	$ 250,271	$ 118,150	$ 250,271	$ 37,645	$ 163,721	56.86 %

		2019 Q1						2018 Q4					
		Exposures before CCF and CRM		Exposures post-CCF and CRM				Exposures before CCF and CRM		Exposures post-CCF and CRM			
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA[3]	RWA density[4]	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA[3]	RWA density[4]
Asset classes													
Corporate	9	$ 102,499	$ 59,982	$ 102,499	$ 29,777	$ 121,597	91.93 %	$ 100,373	$ 60,366	$ 100,373	$ 30,189	$ 120,444	92.25 %
Sovereign	10	90,941	352	90,941	176	7,284	7.99	95,199	423	95,199	212	7,733	8.10
Bank	11	13,545	8,361	13,545	5,699	3,849	20.00	13,367	6,229	13,367	4,648	3,603	20.00
Retail residential mortgages	12	2,920	768	2,920	354	1,671	51.04	2,716	818	2,716	375	1,630	52.73
Other retail	13	12,728	58,268	12,728	165	9,385	72.79	12,576	60,932	12,576	170	9,330	73.20
Equity	14	1,799	1,491	1,799	745	512	20.13	2,001	1,498	2,001	749	727	26.44
Other assets[5]	15	23,734	–	23,734	–	18,020	75.92	22,203	–	22,203	–	17,265	77.76
Total	16	$ 248,166	$ 129,222	$ 248,166	$ 36,916	$ 162,318	56.94 %	$ 248,435	$ 130,266	$ 248,435	$ 36,343	$ 160,732	56.44 %

[1] Excludes securitization and CCR.
[2] Credit conversion factor.
[3] RWA calculated on post-CCF and post-CRM exposures.
[4] Total RWA as a percentage of post-CCF and post-CRM exposures.
[5] Excludes exposures subject to direct capital deductions and threshold deductions.

Standardized Approach – Exposures by Asset Classes and Risk Weights (CR5)[1]

($ millions) As at	LINE #	2019 Q3								2019 Q2							
		Risk-weight							Total credit exposures amount (post-CCF and post-CRM)	Risk-weight							Total credit exposures amount (post-CCF and post-CRM)
		0%	20%	35%	75%	100%	150%	Other		0%	20%	35%	75%	100%	150%	Other	
Asset classes																	
Corporate	1	$ 8,905	$ 2,473	$ –	$ –	$ 123,268	$ 518	$ –	$ 135,164	$ 9,260	$ 2,283	$ –	$ –	$ 123,358	$ 509	$ –	$ 135,410
Sovereign	2	60,651	39,922	–	–	–	–	–	100,573	59,582	37,531	–	–	–	–	–	97,113
Bank	3	–	17,900	–	–	–	–	–	17,900	–	18,715	–	–	–	–	–	18,715
Retail residential mortgages	4	–	8	2,458	1,558	17	–	–	4,041	–	9	2,104	1,381	18	–	–	3,512
Other retail	5	371	245	–	7,476	–	165	–	8,257	467	241	–	6,939	–	170	–	7,817
Equity	6	1,945	157	–	–	3,790	–	–	5,892	1,974	166	–	–	3,814	–	–	5,954
Other assets[2]	7	5,799	–	–	–	13,985	–	143	19,927	5,383	–	–	–	13,879	–	133	19,395
Total	8	$ 77,671	$ 60,705	$ 2,458	$ 9,034	$ 141,060	$ 683	$ 143	$ 291,754	$ 76,666	$ 58,945	$ 2,104	$ 8,320	$ 141,069	$ 679	$ 133	$ 287,916

		2019 Q1								2018 Q4							
		Risk-weight							Total credit exposures amount (post-CCF and post-CRM)	Risk-weight							Total credit exposures amount (post-CCF and post-CRM)
		0%	20%	35%	75%	100%	150%	Other		0%	20%	35%	75%	100%	150%	Other	
Asset classes																	
Corporate	9	$ 9,016	$ 2,287	$ –	$ –	$ 120,637	$ 335	$ –	$ 132,275	$ 8,966	$ 1,552	$ –	$ –	$ 119,861	$ 183	$ –	$ 130,562
Sovereign	10	54,695	36,422	–	–	–	–	–	91,117	56,747	38,664	–	–	–	–	–	95,411
Bank	11	–	19,245	–	–	–	–	–	19,245	–	18,015	–	–	–	–	–	18,015
Retail residential mortgages	12	–	1	1,969	1,286	17	–	–	3,273	–	10	1,719	1,343	19	–	–	3,091
Other retail	13	423	225	–	12,036	–	209	–	12,893	427	212	–	11,830	–	277	–	12,746
Equity	14	1,936	158	–	–	451	–	–	2,545	1,940	155	–	–	655	–	–	2,750
Other assets[2]	15	7,541	–	–	–	16,117	–	76	23,734	6,715	–	–	–	15,414	–	74	22,203
Total	16	$ 73,611	$ 58,338	$ 1,969	$ 13,322	$ 137,222	$ 544	$ 76	$ 285,082	$ 74,795	$ 58,608	$ 1,719	$ 13,173	$ 135,949	$ 460	$ 74	$ 284,778

[1] Excludes securitization and CCR.
[2] Excludes exposures subject to direct capital deductions and threshold deductions.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Corporate[1]

($ millions, except as noted)
As at

2019 Q3

LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
1	0.00 to <0.15 %	AAA to BBB	$ 22,992	$ 64,036	70.06 %	$ 79,784	0.06 %	5,240	38.16 %	2.7	$ 13,902	17.42 %	$ 17	
2	0.15 to <0.25	BBB- to BB+	31,270	21,168	69.19	39,144	0.19	5,906	25.64	2.9	11,081	28.31	18	
3	0.25 to <0.50	BB to BB-	27,515	10,080	68.60	30,493	0.37	8,624	28.78	2.6	12,749	41.81	32	
4	0.50 to <0.75	B+	8,559	2,657	69.71	9,990	0.71	2,627	30.22	2.3	5,663	56.69	21	
5	0.75 to <2.50	B To B-	18,479	4,456	69.85	20,961	1.70	29,985	34.11	2.3	17,920	85.49	121	
6	2.50 to <10.00	CCC+	1,043	273	63.48	1,202	9.97	283	30.23	1.9	1,623	135.02	36	
7	10.00 to <100.00	CCC to CC and below	1,239	493	59.12	1,390	23.49	626	35.62	2.0	2,700	194.24	118	
8	100.00 (Default)	Default	350	29	43.13	351	100.00	295	42.58	1.3	1,014	288.89	89	
9	Total		$ 111,447	$ 103,192	69.65 %	$ 183,315	0.80 %	41,164	32.97 %	2.6	$ 66,652	36.36 %	$ 452	$ 97

2019 Q2

LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
10	0.00 to <0.15 %	AAA to BBB	$ 22,746	$ 64,331	70.04 %	$ 78,459	0.06 %	5,187	38.19 %	2.6	$ 13,806	17.60 %	$ 19	
11	0.15 to <0.25	BBB- to BB+	30,358	20,189	69.20	38,240	0.18	5,863	26.75	2.9	11,131	29.11	18	
12	0.25 to <0.50	BB to BB-	26,901	9,479	68.58	30,139	0.37	8,554	28.85	2.5	12,665	42.02	32	
13	0.50 to <0.75	B+	7,635	2,808	70.09	9,134	0.72	2,442	32.03	2.2	5,502	60.24	21	
14	0.75 to <2.50	B To B-	18,658	4,018	69.96	20,821	1.78	29,742	33.21	2.3	17,608	84.57	122	
15	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
16	10.00 to <100.00	CCC+ to CC and below	2,463	846	61.26	2,800	19.03	927	34.64	2.0	4,935	176.25	189	
17	100.00 (Default)	Default	251	26	32.08	253	100.00	340	38.72	1.4	642	253.75	62	
18	Total		$ 109,012	$ 101,697	69.65 %	$ 179,846	0.81 %	40,882	33.25 %	2.6	$ 66,289	36.86 %	$ 463	$ 68

2019 Q1

LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
19	0.00 to <0.15 %	AAA to BBB	$ 22,608	$ 59,645	70.38 %	$ 75,894	0.06 %	5,198	38.42 %	2.6	$ 13,227	17.43 %	$ 16	
20	0.15 to <0.25	BBB- to BB+	30,548	20,652	69.84	38,417	0.18	5,809	26.29	2.9	11,127	28.96	18	
21	0.25 to <0.50	BB to BB-	25,435	9,677	68.52	28,749	0.38	8,525	29.83	2.6	12,625	43.91	32	
22	0.50 to <0.75	B+	7,720	2,768	69.32	9,093	0.72	2,425	31.17	2.3	5,385	59.22	20	
23	0.75 to <2.50	B To B-	18,010	4,119	70.48	20,231	1.81	29,343	32.14	2.3	16,571	81.91	116	
24	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
25	10.00 to <100.00	CCC+ to CC and below	1,946	740	59.52	2,187	18.59	867	36.97	1.8	4,078	186.47	156	
26	100.00 (Default)	Default	281	29	30.50	281	100.00	302	31.43	1.4	635	225.98	51	
27	Total		$ 106,548	$ 97,630	69.96 %	$ 174,852	0.77 %	40,557	33.21 %	2.6	$ 63,648	36.40 %	$ 409	$ 60

[1] Excludes counterparty exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA to post-CRM EAD.
[7] No internal borrower risk rating (BRR) mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Corporate (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4																		
		PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
	1	0.00 to <0.15 %	AAA to BBB	$ 24,005	$ 62,497	70.15 %	$ 79,278	0.06 %	5,088	38.76 %	2.7	$ 14,559	18.36 %	$ 18	
	2	0.15 to <0.25	BBB- to BB+	29,869	18,157	71.24	36,253	0.18	5,745	25.59	2.9	10,046	27.71	16	
	3	0.25 to <0.50	BB to BB-	25,063	9,425	69.29	28,258	0.38	8,451	29.35	2.7	12,402	43.89	31	
	4	0.50 to <0.75	B+	7,076	2,596	69.75	8,260	0.72	2,387	30.61	2.3	4,802	58.14	18	
	5	0.75 to <2.50	B To B-	18,229	4,098	71.45	20,451	1.83	29,054	31.63	2.3	16,553	80.94	116	
	6	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	7	10.00 to <100.00	CCC+ to CC and below	1,906	716	60.36	2,125	18.74	862	39.80	1.9	4,212	198.21	159	
	8	100.00 (Default)	Default	244	33	34.79	254	100.00	276	31.84	1.5	555	218.50	56	
	9	Total		$ 106,392	$ 97,522	70.23 %	$ 174,879	0.75 %	40,170	33.29 %	2.6	$ 63,129	36.10 %	$ 414	$ 61

[1] Excludes counterparty exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA to post-CRM EAD.
[7] No BRR mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Sovereign[1]

($ millions, except as noted) *As at*	LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
				2019 Q3											
	1	**0.00 to <0.15**	**AAA to BBB**	**$ 89,231**	**$ 4,061**	**76.61 %**	**$ 180,418[7]**	**0.01 %**	**145**	**11.76 %**	**1.7**	**$ 628**	**0.35 %**	**$ 1**	
	2	**0.15 to <0.25**	**BBB- to BB+**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	3	**0.25 to <0.50**	**BB to BB-**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	4	**0.50 to <0.75**	**B+**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	5	**0.75 to <2.50**	**B To B-**	**–**	**–**	**–**	**–**	**2.27**	**95**	**34.00**	**2.5**	**–**	**–**	**–**	
	6	**2.50 to <10.00**	**CCC+**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	7	**10.00 to <100.00**	**CCC to CC and below**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	8	**100.00 (Default)**	**Default**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	
	9	**Total**		**$ 89,231**	**$ 4,061**	**76.61 %**	**$ 180,418**	**0.01 %**	**195**	**11.76 %**	**1.7**	**$ 628**	**0.35 %**	**$ 1**	**$ –**
				2019 Q2											
	10	0.00 to <0.15	AAA to BBB	$ 89,376	$ 4,716	82.78 %	$ 183,366[7]	0.01 %	145	11.53 %	1.7	$ 588	0.32 %	$ 1	
	11	0.15 to <0.25	BBB- to BB+	22	–	–	22	0.22	2	13.00	1.0	2	9.09	–	
	12	0.25 to <0.50	BB to BB-	–	–	–	–	–	–	–	–	–	–	–	
	13	0.50 to <0.75	B+	–	–	–	–	–	–	–	–	–	–	–	
	14	0.75 to <2.50	B To B-	–	–	–	–	2.35	95	34.00	2.5	–	–	–	
	15	2.50 to <10.00[8]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	16	10.00 to <100.00	CCC+ to CC and below	–	–	–	–	–	–	–	–	–	–	–	
	17	100.00 (Default)	Default	–	–	–	–	–	–	–	–	–	–	–	
	18	Total		$ 89,398	$ 4,716	82.78 %	$ 183,388	0.01 %	196	11.53 %	1.7	$ 590	0.32 %	$ 1	$ –
				2019 Q1											
	19	0.00 to <0.15	AAA to BBB	$ 95,550	$ 4,673	82.22 %	$ 190,583[7]	0.01 %	167	12.04 %	1.6	$ 553	0.29 %	$ –	
	20	0.15 to <0.25	BBB- to BB+	262	–	–	262	0.16	7	2.66	3.7	7	2.67	–	
	21	0.25 to <0.50	BB to BB-	–	–	–	–	–	–	–	–	–	–	–	
	22	0.50 to <0.75	B+	–	–	–	–	–	–	–	–	–	–	–	
	23	0.75 to <2.50	B To B-	–	–	–	–	2.35	91	34.00	2.5	–	–	–	
	24	2.50 to <10.00[8]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	25	10.00 to <100.00	CCC+ to CC and below	–	–	–	–	–	–	–	–	–	–	–	
	26	100.00 (Default)	Default	–	–	–	–	–	–	–	–	–	–	–	
	27	Total		$ 95,812	$ 4,673	82.22 %	$ 190,845	0.01 %	218	12.03 %	1.6	$ 560	0.29 %	$ –	$ –

[1] Excludes CCR exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA as a percentage of post-CRM EAD.
[7] Includes residential secured government insured exposures (CMHC). For pre-CRM, these are included under Residential secured – insured.
[8] No internal BRR mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Sovereign (Continued)[1]

($ millions, except as noted) *As at*	LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
				2018 Q4											
	1	0.00 to <0.15	AAA to BBB	$ 92,425	$ 4,963	80.53 %	$ 189,744[7]	0.01 %	165	12.37 %	1.7	$ 556	0.29 %	$ 1	
	2	0.15 to <0.25	BBB- to BB+	225	–	–	225	0.16	4	2.74	4.5	7	3.11	–	
	3	0.25 to <0.50	BB to BB-	–	–	–	–	–	–	–	–	–	–	–	
	4	0.50 to <0.75	B+	–	–	–	–	–	–	–	–	–	–	–	
	5	0.75 to <2.50	B To B-	–	–	–	–	2.35	92	34.00	2.5	–	–	–	
	6	2.50 to <10.00[8]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	7	10.00 to <100.00	CCC+ to CC and below	–	–	–	–	–	–	–	–	–	–	–	
	8	100.00 (Default)	Default	–	–	–	–	–	–	–	–	–	–	–	
	9	Total		$ 92,650	$ 4,963	80.53 %	$ 189,969	0.01 %	215	12.36 %	1.7	$ 563	0.30 %	$ 1	$ –

[1] Excludes CCR exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA as a percentage of post-CRM EAD.
[7] Includes residential secured government insured exposures (CMHC). For pre-CRM, these are included under Residential secured – insured.
[8] No internal BRR mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Bank[1]

($ millions, except as noted) *As at*	LINE #	PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
							2019 Q3								
	1	0.00 to <0.15 %	AAA to BBB	$ 10,343	$ 4,685	75.83 %	$ 14,219	0.04 %	479	34.48 %	1.6	$ 1,487	10.46 %	$ 2	
	2	0.15 to <0.25	BBB- to BB+	339	741	62.36	726	0.16	34	9.74	2.2	61	8.40	–	
	3	0.25 to <0.50	BB to BB-	338	–	20.00	90	0.46	16	13.25	1.0	18	20.00	–	
	4	0.50 to <0.75	B+	28	7	68.30	30	0.71	8	89.56	2.6	52	173.33	–	
	5	0.75 to <2.50	B To B-	1	1	58.78	1	1.93	392	5.98	1.1	–	–	–	
	6	2.50 to <10.00	CCC+	–	–	–	–	–	–	–	–	–	–	–	
	7	10.00 to <100.00	CCC to CC and below	1	–	–	1	19.26	1	55.00	0.3	2	200.00	–	
	8	100.00 (Default)	Default	–	–	–	–	–	1	–	–	–	–	–	
	9	Total		$ 11,050	$ 5,434	73.98 %	$ 15,067	0.05 %	644	33.27 %	1.6	$ 1,620	10.75 %	$ 2	$ –
							2019 Q2								
	10	0.00 to <0.15 %	AAA to BBB	$ 10,894	$ 4,693	75.93 %	$ 14,914	0.04 %	486	34.77 %	1.5	$ 1,548	10.38 %	$ 2	
	11	0.15 to <0.25	BBB- to BB+	299	738	63.03	680	0.16	33	11.04	2.2	64	9.41	–	
	12	0.25 to <0.50	BB to BB-	523	5	97.00	160	0.47	17	14.01	1.0	34	21.25	–	
	13	0.50 to <0.75	B+	30	8	67.34	32	0.72	11	84.46	2.8	55	171.88	–	
	14	0.75 to <2.50	B To B-	42	8	23.59	43	2.35	392	10.94	4.7	16	37.21	–	
	15	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	16	10.00 to <100.00	CCC+ to CC and below	1	–	–	1	19.81	1	55.00	0.3	3	300.00	–	
	17	100.00 (Default)	Default	–	–	–	–	–	1	–	–	–	–	–	
	18	Total		$ 11,789	$ 5,452	74.11 %	$ 15,830	0.06 %	650	33.58 %	1.5	$ 1,720	10.87 %	$ 2	$ –
							2019 Q1								
	19	0.00 to <0.15 %	AAA to BBB	$ 12,832	$ 4,407	74.30 %	$ 16,545	0.05 %	512	26.53 %	1.3	$ 1,520	9.19 %	$ 2	
	20	0.15 to <0.25	BBB- to BB+	366	597	63.93	655	0.16	35	9.51	2.4	62	9.47	–	
	21	0.25 to <0.50	BB to BB-	488	5	100.00	151	0.46	18	14.21	1.0	32	21.19	–	
	22	0.50 to <0.75	B+	5	–	50.00	3	0.72	11	17.82	1.8	1	33.33	–	
	23	0.75 to <2.50	B To B-	118	1	64.72	116	2.35	387	6.69	5.0	27	23.28	–	
	24	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	25	10.00 to <100.00	CCC+ to CC and below	1	–	–	1	19.81	1	55.00	0.2	2	200.00	–	
	26	100.00 (Default)	Default	–	–	–	–	–	1	–	–	–	–	–	
	27	Total		$ 13,810	$ 5,010	73.09 %	$ 17,471	0.07 %	675	25.65 %	1.4	$ 1,644	9.41 %	$ 2	$ –

[1] Excludes CCR exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA as a percentage of post-CRM EAD.
[7] No internal BRR mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Bank (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4																	
		PD scale[2]	External rating	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)	RWA	RWA density[6]	EL	Provisions
	1	0.00 to <0.15 %	AAA to BBB	$ 13,691	$ 4,206	72.26 %	$ 17,321	0.05 %	511	27.71 %	2.2	$ 1,597	9.22 %	$ 3	
	2	0.15 to <0.25	BBB- to BB+	574	83	44.25	440	0.17	42	14.22	2.1	58	13.18	–	
	3	0.25 to <0.50	BB to BB-	568	7	93.78	157	0.46	19	14.36	1.0	33	21.02	–	
	4	0.50 to <0.75	B+	6	1	36.77	3	0.72	8	16.03	2.2	1	33.33	–	
	5	0.75 to <2.50	B To B-	72	1	74.72	73	2.35	388	4.05	4.9	10	13.70	–	
	6	2.50 to <10.00[7]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	7	10.00 to <100.00	CCC+ to CC and below	1	–	–	1	19.81	1	55.00	0.3	2	200.00	–	
	8	100.00 (Default)	Default	–	–	–	–	–	1	–	–	–	–	–	
	9	Total		$ 14,912	$ 4,298	71.74 %	$ 17,995	0.06 %	683	27.17 %	2.2	$ 1,701	9.45 %	$ 3	$ –

[1] Excludes CCR exposures (derivative and repo-style transactions).
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[6] Total RWA as a percentage of post-CRM EAD.
[7] No internal BRR mapped to the prescribed PD range.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Residential Secured

($ millions, except as noted)	LINE #	2019 Q3													
As at		PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF[2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
Canadian Retail Insured[7,8]	1	0.00 to <0.15	$ 54,721	$ 19,186	50.93 %	$ 6,939	0.07 %	396,461	7.12 %		$ 92	1.33 %	$ –	$
	2	0.15 to <0.25	12,513	535	44.39	2,662	0.19	67,957	8.10		88	3.31	–	
	3	0.25 to <0.50	8,703	246	44.19	1,711	0.32	55,529	8.40		86	5.03	–	
	4	0.50 to <0.75	5,738	89	44.95	1,093	0.51	19,482	8.47		78	7.14	–	
	5	0.75 to <2.50	7,273	84	45.61	1,139	1.28	30,414	7.87		136	11.94	1	
	6	2.50 to <10.00	2,093	8	57.62	360	6.06	12,683	6.74		90	25.00	1	
	7	10.00 to <100.00	670	1	63.26	102	25.45	4,078	5.48		31	30.39	1	
	8	100.00 (Default)	197	–	–	29	100.00	1,076	6.18		24	82.76	–	
	9	Total	91,908	20,149	50.63	14,035	0.80	587,680	7.60		625	4.45	3	11
Canadian Retail Uninsured[7]	10	0.00 to <0.15	120,064	61,165	50.25	150,799	0.06	677,490	21.17		5,111	3.39	19	
	11	0.15 to <0.25	30,799	3,456	46.46	32,404	0.19	124,132	24.31		3,215	9.92	15	
	12	0.25 to <0.50	18,045	1,645	46.07	18,803	0.31	89,517	27.19		3,032	16.13	16	
	13	0.50 to <0.75	11,058	607	45.98	11,337	0.52	29,335	26.83		2,567	22.64	16	
	14	0.75 to <2.50	11,410	402	48.69	11,606	1.25	38,122	26.24		4,543	39.14	39	
	15	2.50 to <10.00	2,526	33	57.98	2,546	5.54	12,188	22.14		1,997	78.44	31	
	16	10.00 to <100.00	745	4	67.08	747	29.00	3,745	17.30		713	95.45	39	
	17	100.00 (Default)	201	–	–	201	100.00	953	21.00		398	198.01	12	
	18	Total	194,848	67,312	49.91	228,443	0.42	975,482	22.65		21,576	9.44	187	27
U.S. Retail Uninsured[7]	19	0.00 to <0.15	21,211	12,446	66.04	29,431	0.06	120,263	31.60		1,485	5.05	5	
	20	0.15 to <0.25	5,921	520	40.77	6,133	0.19	27,832	30.66		779	12.70	4	
	21	0.25 to <0.50	4,400	381	36.59	4,539	0.32	24,565	32.56		881	19.41	5	
	22	0.50 to <0.75	3,082	228	32.77	3,157	0.52	10,318	35.71		956	30.28	6	
	23	0.75 to <2.50	5,194	262	31.29	5,275	1.26	19,923	36.50		2,918	55.32	24	
	24	2.50 to <10.00	1,148	79	12.07	1,157	5.81	7,985	36.28		1,518	131.20	24	
	25	10.00 to <100.00	436	23	11.66	439	24.95	3,725	36.44		894	203.64	41	
	26	100.00 (Default)	712	–	–	712	100.00	4,054	29.58		744	104.49	154	
	27	Total	42,104	13,939	62.70	50,843	2.00	218,665	32.46		10,175	20.01	263	75
Total residential secured	28		$ 328,860	$ 101,400	51.81 %	$ 293,321	0.71 %	1,781,827	23.26 %		$ 32,376	11.04 %	$ 453	$ 113

1 Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
2 Exposures based on obligors prior to CRM.
3 Exposures after CRM reflecting guarantor.
4 Number of retail accounts.
5 Average maturity is not used in the calculation of retail exposure RWA.
6 Total RWA as a percentage of post-CRM EAD.
7 Includes residential mortgages and home equity lines of credit (HELOCs). Insured classification reflects when insurance on the exposure is used for CRM for reduction of RWA.
8 Includes government insured exposures (CMHC) and exposures insured by corporate entities. For post-CRM, government insured exposures are included in Sovereign.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Residential Secured (Continued)

($ millions, except as noted) *As at*	LINE #	2019 Q2												
		PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF[2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
Canadian Retail Insured[7,8]	1	0.00 to <0.15	$ 56,247	$ 19,410	50.94 %	$ 6,963	0.07 %	407,415	6.98 %		$ 91	1.31 %	$ –	$
	2	0.15 to <0.25	11,477	561	45.21	2,315	0.19	60,814	8.13		78	3.37	–	
	3	0.25 to <0.50	9,168	257	44.11	1,864	0.32	60,700	8.46		94	5.04	1	
	4	0.50 to <0.75	6,210	88	43.75	1,289	0.51	21,290	8.68		94	7.29	1	
	5	0.75 to <2.50	7,803	85	46.96	1,277	1.25	32,431	7.95		150	11.75	1	
	6	2.50 to <10.00	2,158	8	56.62	378	5.96	13,031	6.60		92	24.34	1	
	7	10.00 to <100.00	696	1	66.50	98	26.21	4,220	5.18		29	29.59	1	
	8	100.00 (Default)	195	–	–	24	100.00	1,103	6.61		21	87.50	–	
	9	Total	93,954	20,410	50.65	14,208	0.77	601,004	7.58		649	4.57	5	10
Canadian Retail Uninsured[7]	10	0.00 to <0.15	115,095	60,606	50.09	145,448	0.06	668,228	20.88		4,836	3.32	17	
	11	0.15 to <0.25	28,994	3,256	44.53	30,444	0.19	114,729	24.29		3,045	10.00	14	
	12	0.25 to <0.50	17,860	1,568	43.51	18,543	0.31	90,209	26.13		2,870	15.48	15	
	13	0.50 to <0.75	10,870	612	42.68	11,131	0.51	30,045	26.99		2,531	22.74	15	
	14	0.75 to <2.50	11,743	419	44.25	11,929	1.24	39,291	26.15		4,617	38.70	38	
	15	2.50 to <10.00	2,478	29	54.73	2,494	5.58	12,140	21.85		1,936	77.63	30	
	16	10.00 to <100.00	714	3	59.81	716	29.64	3,637	17.25		667	93.16	38	
	17	100.00 (Default)	189	–	–	189	100.00	972	21.01		369	195.24	12	
	18	Total	187,943	66,493	49.56	220,894	0.43	959,251	22.39		20,871	9.45	179	22
U.S. Retail Uninsured[7]	19	0.00 to <0.15	20,816	12,371	68.47	29,286	0.06	117,373	31.53		1,468	5.01	5	
	20	0.15 to <0.25	5,931	529	64.85	6,274	0.19	28,696	30.93		805	12.83	4	
	21	0.25 to <0.50	4,365	378	61.54	4,597	0.32	25,030	32.42		888	19.32	5	
	22	0.50 to <0.75	3,132	231	60.81	3,272	0.52	10,527	35.86		995	30.41	6	
	23	0.75 to <2.50	5,186	367	61.07	5,410	1.31	22,235	36.77		3,099	57.28	26	
	24	2.50 to <10.00	1,166	81	28.96	1,189	5.67	8,133	36.60		1,566	131.71	25	
	25	10.00 to <100.00	436	21	19.81	440	24.85	3,852	37.74		932	211.82	42	
	26	100.00 (Default)	745	–	–	745	100.00	4,201	29.86		715	95.97	168	
	27	Total	41,777	13,978	67.52	51,213	2.06	220,047	32.51		10,468	20.44	281	96
Total residential secured	28		$ 323,674	$ 100,881	52.27 %	$ 286,315	0.72 %	1,780,302	23.06 %		$ 31,988	11.17 %	$ 465	$ 128

[1] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[2] Exposures based on obligors prior to CRM.
[3] Exposures after CRM reflecting guarantor.
[4] Number of retail accounts.
[5] Average maturity is not used in the calculation of retail exposure RWA.
[6] Total RWA as a percentage of post-CRM EAD.
[7] Includes residential mortgages and HELOCs. Insured classification reflects when insurance on the exposure is used for CRM for reduction of RWA.
[8] Includes government insured exposures (CMHC) and exposures insured by corporate entities. For post-CRM, government insured exposures are included in Sovereign.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Residential Secured (Continued)

($ millions, except as noted) *As at*	LINE #	2019 Q1													
		PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF[2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
Canadian Retail Insured[7,8]	1	0.00 to <0.15	$ 58,331	$ 19,621	46.56 %	$ 7,206	0.07 %	419,456	6.94 %		$ 95	1.32 %	$ –	$
	2	0.15 to <0.25	10,987	408	42.20	2,153	0.20	58,417	8.06		73	3.39	–	
	3	0.25 to <0.50	9,143	256	45.47	1,986	0.32	61,306	8.43		100	5.04	1	
	4	0.50 to <0.75	6,337	119	51.11	1,201	0.52	21,548	8.48		86	7.16	1	
	5	0.75 to <2.50	8,088	65	63.59	1,312	1.28	33,683	7.88		156	11.89	1	
	6	2.50 to <10.00	2,230	6	86.11	371	6.18	13,641	6.56		91	24.53	1	
	7	10.00 to <100.00	719	2	77.13	111	24.91	4,372	5.20		32	28.83	1	
	8	100.00 (Default)	188	–	–	25	100.00	1,092	6.20		20	80.00	–	
	9	Total	96,023	20,477	46.56	14,365	0.79	613,515	7.51		653	4.55	5	10
Canadian Retail Uninsured[7]	10	0.00 to <0.15	119,452	60,857	50.42	150,138	0.05	684,972	22.93		5,143	3.43	18	
	11	0.15 to <0.25	24,034	1,748	55.57	25,005	0.19	95,234	25.22		2,593	10.37	12	
	12	0.25 to <0.50	17,178	2,156	71.10	18,710	0.31	86,097	29.28		3,176	16.97	17	
	13	0.50 to <0.75	9,198	495	62.81	9,509	0.52	26,495	27.57		2,216	23.30	14	
	14	0.75 to <2.50	10,780	307	72.45	11,003	1.25	38,320	26.99		4,453	40.47	37	
	15	2.50 to <10.00	2,349	21	83.27	2,366	5.59	12,576	22.81		1,918	81.07	29	
	16	10.00 to <100.00	690	3	78.30	693	28.84	3,505	17.03		644	92.93	36	
	17	100.00 (Default)	181	–	–	181	100.00	900	18.70		322	177.90	10	
	18	Total	183,862	65,587	51.45	217,605	0.41	948,099	24.12		20,465	9.40	173	23
U.S. Retail Uninsured[7]	19	0.00 to <0.15	15,809	10,953	67.74	23,229	0.06	104,554	22.84		795	3.42	3	
	20	0.15 to <0.25	5,769	542	55.12	6,068	0.19	21,462	18.58		469	7.73	2	
	21	0.25 to <0.50	5,364	376	51.52	5,558	0.32	27,453	21.16		704	12.67	4	
	22	0.50 to <0.75	3,918	294	48.40	4,060	0.52	16,451	23.50		814	20.05	5	
	23	0.75 to <2.50	6,899	1,123	50.72	7,468	1.36	29,190	28.25		3,455	46.26	30	
	24	2.50 to <10.00	1,868	345	47.10	2,031	5.72	13,394	35.93		2,625	129.25	41	
	25	10.00 to <100.00	579	73	46.81	613	23.46	5,671	34.73		1,197	195.27	50	
	26	100.00 (Default)	741	–	–	741	100.00	4,268	27.81		401	54.12	176	
	27	Total	40,947	13,706	64.35	49,768	2.35	222,443	23.75		10,460	21.02	311	96
Total residential secured	28		$ 320,832	$ 99,770	52.22 %	$ 281,738	0.75 %	1,784,057	22.55 %		$ 31,578	11.21 %	$ 489	$ 129

[1] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[2] Exposures based on obligors prior to CRM.
[3] Exposures after CRM reflecting guarantor.
[4] Number of retail accounts.
[5] Average maturity is not used in the calculation of retail exposure RWA.
[6] Total RWA as a percentage of post-CRM EAD.
[7] Includes residential mortgages and HELOCs. Insured classification reflects when insurance on the exposure is used for CRM for reduction of RWA.
[8] Includes government insured exposures (CMHC) and exposures insured by corporate entities. For post-CRM, government insured exposures are included in Sovereign.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Residential Secured (Continued)

($ millions, except as noted) *As at*	LINE #	2018 Q4													
		PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF[2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
Canadian Retail Insured[7,8]	1	0.00 to <0.15	% $ 60,013	$ 19,628	46.08	% $ 7,260	0.07	% 429,856	6.91	%	$ 94	1.29	% $ –	$
	2	0.15 to <0.25	10,966	404	40.30	2,301	0.19	59,106	8.02		76	3.30	–	
	3	0.25 to <0.50	9,801	256	44.55	2,085	0.32	63,202	8.44		105	5.04	1	
	4	0.50 to <0.75	6,192	121	48.28	1,120	0.51	23,422	8.23		77	6.88	–	
	5	0.75 to <2.50	8,551	57	61.95	1,431	1.21	33,693	7.90		164	11.46	1	
	6	2.50 to <10.00	2,197	4	85.72	366	6.25	13,470	6.49		89	24.32	1	
	7	10.00 to <100.00	683	1	83.83	103	25.16	4,264	5.03		29	28.16	1	
	8	100.00 (Default)	194	–	–	27	100.00	1,124	6.21		22	81.48	–	
	9	Total	98,597	20,471	46.01	14,693	0.78	628,137	7.47		656	4.46	4	7
Canadian Retail Uninsured[7]	10	0.00 to <0.15	117,313	59,982	50.42	147,555	0.05	677,733	23.01		5,141	3.48	18	
	11	0.15 to <0.25	22,812	1,686	100.00	24,498	0.19	91,489	24.54		2,464	10.06	11	
	12	0.25 to <0.50	17,518	1,743	68.19	18,706	0.31	85,807	28.13		3,104	16.59	16	
	13	0.50 to <0.75	8,908	472	64.52	9,213	0.52	25,859	27.91		2,173	23.59	13	
	14	0.75 to <2.50	10,530	273	72.52	10,728	1.24	38,054	27.41		4,369	40.73	36	
	15	2.50 to <10.00	2,178	11	92.34	2,188	5.59	11,841	22.23		1,727	78.93	27	
	16	10.00 to <100.00	636	1	90.19	637	29.15	3,321	17.33		596	93.56	34	
	17	100.00 (Default)	168	–	–	168	100.00	898	19.60		306	182.14	10	
	18	Total	180,063	64,168	52.41	213,693	0.39	935,002	24.04		19,880	9.30	165	22
U.S. Retail Uninsured[7]	19	0.00 to <0.15	15,009	10,850	67.63	22,347	0.06	102,531	23.42		788	3.53	3	
	20	0.15 to <0.25	5,790	556	55.66	6,100	0.19	21,658	19.10		485	7.95	2	
	21	0.25 to <0.50	5,350	383	52.21	5,550	0.32	28,118	20.92		695	12.52	4	
	22	0.50 to <0.75	4,062	294	48.48	4,205	0.52	15,909	23.41		837	19.90	5	
	23	0.75 to <2.50	7,452	1,045	51.90	7,995	1.31	32,024	27.84		3,585	44.84	31	
	24	2.50 to <10.00	1,928	351	45.83	2,089	5.81	13,501	35.73		2,714	129.92	43	
	25	10.00 to <100.00	635	80	47.61	673	23.14	5,868	36.17		1,367	203.12	56	
	26	100.00 (Default)	782	–	–	782	100.00	4,297	27.71		422	53.96	185	
	27	Total	41,008	13,559	64.40	49,741	2.47	223,906	24.08		10,893	21.90	329	106
Total residential secured	28		$ 319,668	$ 98,198	52.73	% $ 278,127	0.76	% 1,787,045	22.50	%	$ 31,429	11.30	% $ 498	$ 135

[1] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[2] Exposures based on obligors prior to CRM.
[3] Exposures after CRM reflecting guarantor.
[4] Number of retail accounts.
[5] Average maturity is not used in the calculation of retail exposure RWA.
[6] Total RWA as a percentage of post-CRM EAD.
[7] Includes residential mortgages and HELOCs. Insured classification reflects when insurance on the exposure is used for CRM for reduction of RWA.
[8] Includes government insured exposures (CMHC) and exposures insured by corporate entities. For post-CRM, government insured exposures are included in Sovereign.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Qualifying Revolving Retail (QRR)[1]

($ millions, except as noted)
As at

2019 Q3

LINE #	PD scale[2]	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGB (%)	Average maturity (years)[6]	RWA	RWA density[7]	EL	Provisions
1	**0.00 to <0.15**	**$ 4,997**	**$ 102,037**	**62.49 %**	**$ 68,759**	**0.05 %**	**11,868,359**	**88.14 %**		**$ 1,962**	**2.85 %**	**$ 28**	
2	**0.15 to <0.25**	**1,804**	**12,294**	**61.26**	**9,336**	**0.19**	**1,807,851**	**89.23**		**917**	**9.82**	**16**	
3	**0.25 to <0.50**	**2,288**	**9,580**	**62.17**	**8,244**	**0.32**	**2,274,295**	**89.23**		**1,214**	**14.73**	**23**	
4	**0.50 to <0.75**	**2,965**	**8,096**	**61.69**	**7,960**	**0.53**	**1,308,023**	**89.30**		**1,753**	**22.02**	**37**	
5	**0.75 to <2.50**	**12,228**	**14,817**	**61.41**	**21,327**	**1.50**	**3,969,454**	**89.39**		**10,327**	**48.42**	**287**	
6	**2.50 to <10.00**	**9,595**	**3,936**	**74.24**	**12,517**	**5.64**	**3,581,638**	**88.99**		**15,162**	**121.13**	**627**	
7	**10.00 to <100.00**	**2,520**	**538**	**87.08**	**2,988**	**25.54**	**1,675,295**	**84.74**		**6,766**	**226.44**	**654**	
8	**100.00 (Default)**	**165**	**–**	**–**	**165**	**100.00**	**58,303**	**75.79**		**52**	**31.52**	**121**	
9	**Total**	**$ 36,562**	**$ 151,298**	**62.61 %**	**$ 131,296**	**1.58 %**	**26,543,218**	**88.55 %**		**$ 38,153**	**29.06 %**	**$ 1,793**	**$ 255**

2019 Q2

	PD scale[2]	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGB (%)	Average maturity (years)[6]	RWA	RWA density[7]	EL	Provisions
10	0.00 to <0.15	$ 4,614	$ 100,232	63.05 %	$ 67,809	0.05 %	11,652,085	88.12 %		$ 1,945	2.87 %	$ 28	
11	0.15 to <0.25	1,770	12,360	62.08	9,443	0.19	1,849,536	89.01		925	9.80	16	
12	0.25 to <0.50	2,251	10,706	61.23	8,807	0.33	2,266,844	89.04		1,325	15.04	26	
13	0.50 to <0.75	2,921	6,733	65.12	7,305	0.52	1,284,435	89.13		1,600	21.90	34	
14	0.75 to <2.50	12,179	14,744	62.28	21,361	1.50	3,962,770	89.20		10,300	48.22	286	
15	2.50 to <10.00	9,541	3,823	74.28	12,380	5.63	3,730,598	88.85		14,950	120.76	618	
16	10.00 to <100.00	2,611	515	87.01	3,060	26.01	1,738,707	84.65		6,952	227.19	681	
17	100.00 (Default)	174	–	–	174	100.00	66,610	74.93		57	32.76	126	
18	Total	$ 36,061	$ 149,113	63.23 %	$ 130,339	1.61 %	26,551,585	88.45 %		$ 38,054	29.20 %	$ 1,815	$ 326

2019 Q1

	PD scale[2]	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGB (%)	Average maturity (years)[6]	RWA	RWA density[7]	EL	Provisions
19	0.00 to <0.15	$ 4,586	$ 92,446	61.69 %	$ 61,615	0.04 %	11,055,247	88.09 %		$ 1,705	2.77 %	$ 24	
20	0.15 to <0.25	1,528	9,858	60.50	7,492	0.19	1,621,828	89.58		739	9.86	13	
21	0.25 to <0.50	1,933	8,860	59.11	7,170	0.33	2,098,843	89.65		1,093	15.24	21	
22	0.50 to <0.75	2,407	5,416	62.44	5,789	0.53	1,176,010	89.59		1,277	22.06	27	
23	0.75 to <2.50	10,035	12,475	59.93	17,510	1.50	3,780,365	89.62		8,468	48.36	235	
24	2.50 to <10.00	7,631	3,282	73.18	10,034	5.60	3,379,348	89.37		12,155	121.14	502	
25	10.00 to <100.00	2,182	426	84.92	2,544	27.28	1,578,345	85.31		5,839	229.52	600	
26	100.00 (Default)	106	–	–	106	100.00	56,673	74.41		26	24.53	77	
27	Total	$ 30,408	$ 132,763	61.65 %	$ 112,260	1.53 %	24,746,659	88.65 %		$ 31,302	27.88 %	$ 1,499	$ 302

[1] Certain comparative numbers have been restated to conform with the presentation adopted in the current period.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Number of retail accounts.
[6] Average maturity is not used in the calculation of retail exposure RWA.
[7] Total RWA to post-CRM EAD.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Qualifying Revolving Retail (QRR) (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4																		
		PD scale[2]	Original on-balance sheet gross exposure[3]	Off-balance sheet exposures pre-CCF[3]	Average CCF (%)	EAD post CRM and post-CCF[4]	Average PD (%)	Number of obligors[5]	Average LGD (%)	Average maturity (years)[6]	RWA	RWA density[7]	EL	Provisions
	1	0.00 to <0.15	% $ 4,777	$ 91,661	62.48 %	$ 62,045	0.04 %	10,899,313	88.06 %		$ 1,716	2.77 %	$ 24	
	2	0.15 to <0.25	1,547	9,744	61.05	7,495	0.19	1,618,814	89.52		738	9.85	13	
	3	0.25 to <0.50	1,946	7,630	61.60	6,646	0.32	2,069,797	89.55		983	14.79	19	
	4	0.50 to <0.75	2,413	6,365	59.96	6,230	0.52	1,170,712	89.53		1,370	21.99	29	
	5	0.75 to <2.50	10,022	12,262	60.04	17,384	1.49	3,688,044	89.65		8,403	48.34	233	
	6	2.50 to <10.00	7,616	3,262	72.85	9,992	5.60	3,450,544	89.40		12,110	121.20	500	
	7	10.00 to <100.00	2,118	433	84.98	2,486	26.71	1,602,780	85.20		5,688	228.80	572	
	8	100.00 (Default)	110	–	–	110	100.00	51,849	72.69		25	22.73	78	
	9	Total	$ 30,549	$ 131,357	62.30 %	$ 112,388	1.50 %	24,551,853	88.61 %		$ 31,033	27.61 %	$ 1,468	$ 273

[1] Certain comparative numbers have been restated to conform with the presentation adopted in the current period.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Exposures based on obligors prior to CRM.
[4] Exposures after CRM reflecting guarantor.
[5] Number of retail accounts.
[6] Average maturity is not used in the calculation of retail exposure RWA.
[7] Total RWA to post-CRM EAD.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Other Retail

($ millions, except as noted)
As at

LINE #	PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF [2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
	2019 Q3												
1	**0.00 to <0.15**	**$ 9,026**	**$ 4,378**	**61.13 %**	**$ 11,703**	**0.08 %**	**746,696**	**45.39 %**		**$ 1,123**	**9.60 %**	**$ 4**	
2	**0.15 to <0.25**	**5,649**	**2,602**	**42.58**	**6,757**	**0.20**	**354,642**	**46.70**		**1,339**	**19.82**	**6**	
3	**0.25 to <0.50**	**11,781**	**1,877**	**60.40**	**12,914**	**0.35**	**499,059**	**39.50**		**3,122**	**24.18**	**18**	
4	**0.50 to <0.75**	**6,740**	**739**	**75.69**	**7,299**	**0.53**	**267,952**	**47.91**		**2,750**	**37.68**	**18**	
5	**0.75 to <2.50**	**24,398**	**1,749**	**60.69**	**25,459**	**1.53**	**899,436**	**50.37**		**15,644**	**61.45**	**196**	
6	**2.50 to <10.00**	**14,262**	**548**	**52.46**	**14,550**	**5.66**	**562,014**	**51.16**		**11,851**	**81.45**	**421**	
7	**10.00 to <100.00**	**4,206**	**66**	**49.61**	**4,239**	**26.12**	**180,272**	**49.43**		**4,791**	**113.02**	**545**	
8	**100.00 (Default)**	**435**	**5**	**100.00**	**440**	**100.00**	**13,802**	**47.57**		**283**	**64.32**	**188**	
9	**Total**	**$ 76,497**	**$ 11,964**	**57.37 %**	**$ 83,361**	**3.44 %**	**3,523,873**	**47.55 %**		**$ 40,903**	**49.07 %**	**$ 1,396**	**$ 109**
	2019 Q2												
10	0.00 to <0.15	$ 9,036	$ 4,346	61.33 %	$ 11,701	0.08 %	743,551	45.17 %		$ 1,120	9.57 %	$ 4	
11	0.15 to <0.25	5,555	2,516	42.37	6,621	0.20	355,487	46.12		1,295	19.56	6	
12	0.25 to <0.50	11,692	1,874	60.66	12,829	0.35	499,765	39.15		3,073	23.95	17	
13	0.50 to <0.75	6,433	705	75.80	6,968	0.53	261,516	48.03		2,631	37.76	18	
14	0.75 to <2.50	23,245	1,729	61.27	24,303	1.53	802,568	50.34		14,933	61.45	188	
15	2.50 to <10.00	13,990	484	52.58	14,245	5.69	615,049	50.88		11,549	81.07	412	
16	10.00 to <100.00	4,256	64	53.19	4,290	25.78	183,267	49.10		4,817	112.28	542	
17	100.00 (Default)	427	4	100.00	431	100.00	13,538	48.70		265	61.48	187	
18	Total	$ 74,634	$ 11,722	57.62 %	$ 81,388	3.47 %	3,474,741	47.31 %		$ 39,683	48.76 %	$ 1,374	$ 110
	2019 Q1												
19	0.00 to <0.15	$ 9,491	$ 4,144	64.57 %	$ 12,169	0.08 %	732,709	44.42 %		$ 1,133	9.31 %	$ 4	
20	0.15 to <0.25	5,684	2,514	42.01	6,740	0.20	358,071	45.37		1,296	19.23	6	
21	0.25 to <0.50	11,768	1,821	60.73	12,873	0.35	504,919	38.62		3,041	23.62	17	
22	0.50 to <0.75	6,415	689	76.49	6,942	0.53	260,097	47.44		2,589	37.29	17	
23	0.75 to <2.50	22,462	1,666	61.14	23,479	1.51	847,490	49.83		14,244	60.67	178	
24	2.50 to <10.00	12,913	470	52.23	13,159	5.67	534,544	50.60		10,603	80.58	377	
25	10.00 to <100.00	3,941	66	52.91	3,976	26.65	180,305	48.35		4,396	110.56	511	
26	100.00 (Default)	440	4	100.00	444	100.00	13,802	47.46		273	61.49	190	
27	Total	$ 73,114	$ 11,374	58.62 %	$ 79,782	3.40 %	3,431,937	46.65 %		$ 37,575	47.10 %	$ 1,300	$ 111

[1] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[2] Exposures based on obligors prior to CRM.
[3] Exposures after CRM reflecting guarantor.
[4] Number of retail accounts.
[5] Average maturity is not used in the calculation of retail exposure RWA.
[6] Total RWA as a percentage of post-CRM EAD.

IRB – Credit Risk Exposures by Portfolio and PD Range (CR6) – Other Retail (Continued)

($ millions, except as noted) *As at*	LINE #	2018 Q4																		
		PD scale[1]	Original on-balance sheet gross exposure[2]	Off-balance sheet exposures pre-CCF [2]	Average CCF (%)	EAD post CRM and post-CCF[3]	Average PD (%)	Number of obligors[4]	Average LGD (%)	Average maturity (years)[5]	RWA	RWA density[6]	EL	Provisions
	1	0.00 to <0.15	$ 10,335	$ 4,168	64.75 %	$ 13,034	0.07 %	756,080	45.16 %		$ 1,203	9.23 %	$ 4	
	2	0.15 to <0.25	5,723	2,525	41.91	6,781	0.20	362,403	46.67		1,341	19.78	6	
	3	0.25 to <0.50	12,122	1,778	60.58	13,199	0.35	505,388	38.62		3,122	23.65	18	
	4	0.50 to <0.75	6,321	695	77.09	6,857	0.53	255,005	47.71		2,573	37.52	17	
	5	0.75 to <2.50	22,316	1,678	61.16	23,342	1.49	843,607	49.86		14,090	60.36	174	
	6	2.50 to <10.00	12,735	498	51.24	12,990	5.70	500,255	50.35		10,420	80.22	372	
	7	10.00 to <100.00	3,847	64	53.92	3,882	26.41	180,379	48.78		4,328	111.49	498	
	8	100.00 (Default)	425	4	100.00	428	100.00	16,454	47.39		272	63.55	183	
	9	Total	$ 73,824	$ 11,410	58.63 %	$ 80,513	3.29 %	3,419,571	46.82 %		$ 37,349	46.39 %	$ 1,272	$ 103

[1] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[2] Exposures based on obligors prior to CRM.
[3] Exposures after CRM reflecting guarantor.
[4] Number of retail accounts.
[5] Average maturity is not used in the calculation of retail exposure RWA.
[6] Total RWA as a percentage of post-CRM EAD.

Analysis of Counterparty Credit Risk (CCR) Exposure by Approach (CCR1)[1]

($ millions, except as noted) *As at*	LINE #	2019 Q3 Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used computing regulatory EAD	EAD post-CRM[2]	RWA
SA-CCR (for derivatives)	1	$ 9,824	$ 25,658	$	1.4	$ 49,670	$ 7,290
Current exposure method (for derivatives)	2	–	–		–	–	–
Internal model method (for derivatives and SFTs)	3			–	–	–	–
Simple approach for credit risk mitigation (for SFTs)	4					920	9
Comprehensive approach for credit risk mitigation (for SFTs)	5					309,920	1,952
VaR for SFTs	6					–	–
Total	7					$ 360,510	$ 9,251

		2019 Q2 Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used computing regulatory EAD	EAD post-CRM[2]	RWA
SA-CCR (for derivatives)	8	$ 9,204	$ 26,206	$	1.4	$ 49,568	$ 7,358
Current exposure method (for derivatives)	9	–	–		–	–	–
Internal model method (for derivatives and SFTs)	10			–	–	–	–
Simple approach for credit risk mitigation (for SFTs)	11					983	9
Comprehensive approach for credit risk mitigation (for SFTs)	12					296,335	2,044
VaR for SFTs	13					–	–
Total	14					$ 346,886	$ 9,411

		2019 Q1 Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used computing regulatory EAD	EAD post-CRM[2]	RWA
SA-CCR (for derivatives)	15	$ 11,215	$ 24,926	$	1.4	$ 50,590	$ 6,974
Current exposure method (for derivatives)	16	–	–		–	–	–
Internal model method (for derivatives and SFTs)	17			–	–	–	–
Simple approach for credit risk mitigation (for SFTs)	18					1,248	12
Comprehensive approach for credit risk mitigation (for SFTs)	19					255,733	1,822
VaR for SFTs	20					–	–
Total	21					$ 307,571	$ 8,808

		2018 Q4 Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used computing regulatory EAD	EAD post-CRM[2]	RWA
SA-CCR (for derivatives)	22	$ –	$ –	$	1.4	$ –	$ –
Current exposure method (for derivatives)	23	21,986	28,171		–	50,151	5,209
Internal model method (for derivatives and SFTs)	24			–	–	–	–
Simple approach for credit risk mitigation (for SFTs)	25					1,345	13
Comprehensive approach for credit risk mitigation (for SFTs)	26					254,409	1,750
VaR for SFTs	27					–	–
Total	28					$ 305,905	$ 6,972

[1] Excludes exposures and RWA for QCCPs and CVA.
[2] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.

Credit Valuation Adjustment (CVA) Capital Charge (CCR2)

($ millions) *As at*	LINE #	2019 Q3		2019 Q2		2019 Q1		2018 Q4	
Total portfolios subject to the Advanced CVA capital charge		**EAD post-CRM**	**RWA**	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA
i) VaR component (including the 3x multiplier)	1	**$ –**	**$ –**	$ –	$ –	$ –	$ –	$ –	$ –
ii) Stressed VaR component (including the 3x multiplier)	2		**–**		–		–		–
All portfolios subject to the standardized CVA capital charge	3	**32,804**	**5,299**	32,751	4,625	33,460	4,815	38,358	4,916
Total subject to the CVA capital charge[1]	4	**$ 32,804**	**$ 5,299**	$ 32,751	$ 4,625	$ 33,460	$ 4,815	$ 38,358	$ 4,916

[1] For fiscal 2019, the CVA has been fully phased-in. For fiscal 2018, the scalars for inclusion of CVA for CET1, Tier 1, and Total Capital RWA were 80%, 83%, and 86%, respectively.

Standardized Approach – CCR Exposures by Regulatory Portfolio and Risk Weights (CCR3)

($ millions) *As at*	LINE #	2019 Q3									2019 Q2								
		0%	**10%**	**20%**	**50%**	**75%**	**100%**	**150%**	**Other**	**Risk-weight Total credit exposure**	0%	10%	20%	50%	75%	100%	150%	Other	Risk-weight Total credit exposure
Regulatory portfolio[1]																			
Corporate	1	**$ 912**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 212**	**$ –**	**$ –**	**$ 1,124**	$ 973	$ –	$ –	$ –	$ –	$ 193	$ –	$ –	$ 1,166
Sovereign	2	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Bank	3	**–**	**–**	**2**	**–**	**–**	**–**	**–**	**–**	**2**	–	–	3	–	–	–	–	–	3
Total	4	**$ 912**	**$ –**	**$ 2**	**$ –**	**$ –**	**$ 212**	**$ –**	**$ –**	**$ 1,126**	$ 973	$ –	$ 3	$ –	$ –	$ 193	$ –	$ –	$ 1,169

		2019 Q1									2018 Q4								
		0%	10%	20%	50%	75%	100%	150%	Other	Risk-weight Total credit exposure	0%	10%	20%	50%	75%	100%	150%	Other	Risk-weight Total credit exposure
Regulatory portfolio[1]																			
Corporate	5	$ 1,236	$ –	$ –	$ –	$ –	$ 196	$ –	$ –	$ 1,432	$ 1,331	$ –	$ –	$ –	$ –	$ 93	$ –	$ –	$ 1,424
Sovereign	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Bank	7	–	–	2	–	–	–	–	–	2	–	–	4	–	–	–	–	–	4
Total	8	$ 1,236	$ –	$ 2	$ –	$ –	$ 196	$ –	$ –	$ 1,434	$ 1,331	$ –	$ 4	$ –	$ –	$ 93	$ –	$ –	$ 1,428

[1] Excludes any exposures cleared through a qualified CCP.

CCR Exposures by Portfolio and PD Scale (CCR4) – Corporate[1]

($ millions, except as noted)
As at

LINE #	PD scale[2]	EAD post-CRM	Average PD	Number of obligors[3]	Average LGD	Average maturity (years)	RWA	RWA density[4]
	2019 Q3							
1	**0.00 to <0.15 % $**	**165,762**	**0.05 %**	**2,908**	**3.61 %**	**0.4 $**	**2,184**	**1.32 %**
2	**0.15 to <0.25**	**23,336**	**0.20**	**1,636**	**5.23**	**0.4**	**942**	**4.04**
3	**0.25 to <0.50**	**7,678**	**0.39**	**862**	**5.20**	**0.5**	**546**	**7.11**
4	**0.50 to <0.75**	**4,886**	**0.71**	**263**	**5.40**	**0.3**	**451**	**9.23**
5	**0.75 to <2.50**	**3,270**	**1.65**	**478**	**8.14**	**0.9**	**682**	**20.86**
6	**2.50 to <10.00**	**18**	**9.97**	**13**	**30.13**	**1.4**	**22**	**122.22**
7	**10.00 to <100.00**	**16**	**21.77**	**18**	**23.71**	**2.8**	**23**	**143.75**
8	**100.00 (Default)**	**–**	**100.00**	**2**	**30.76**	**1.0**	**1**	**–**
9	**Total $**	**204,966**	**0.13 %**	**6,180**	**3.97 %**	**0.4 $**	**4,851**	**2.37 %**
	2019 Q2							
10	0.00 to <0.15 % $	159,264	0.05 %	2,832	3.25 %	0.4 $	2,009	1.26 %
11	0.15 to <0.25	24,554	0.19	1,586	5.93	0.4	1,056	4.30
12	0.25 to <0.50	6,542	0.38	824	5.53	0.5	478	7.31
13	0.50 to <0.75	1,120	0.72	245	9.51	1.3	214	19.11
14	0.75 to <2.50	7,700	1.70	444	6.36	0.4	1,234	16.03
15	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16	10.00 to <100.00	28	22.44	32	23.63	2.8	37	132.14
17	100.00 (Default)	1	100.00	2	32.54	1.0	3	300.00
18	Total $	199,209	0.15 %	5,965	3.81 %	0.4 $	5,031	2.53 %
	2019 Q1							
19	0.00 to <0.15 % $	128,347	0.05 %	2,776	3.46 %	0.4 $	1,821	1.42 %
20	0.15 to <0.25	23,178	0.19	1,517	5.47	0.4	1,014	4.37
21	0.25 to <0.50	7,237	0.37	814	4.13	0.4	393	5.43
22	0.50 to <0.75	609	0.72	233	14.58	1.8	185	30.38
23	0.75 to <2.50	15,744	2.24	473	1.95	0.5	793	5.04
24	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
25	10.00 to <100.00	28	21.03	30	22.27	2.1	32	114.29
26	100.00 (Default)	1	100.00	3	32.12	1.0	4	400.00
27	Total $	175,144	0.29 %	5,846	3.66 %	0.4 $	4,242	2.42 %

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

CCR Exposures by Portfolio and PD Scale (CCR4) – Corporate (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4											
		PD scale[2]		EAD post-CRM		Average PD		Number of obligors[3]	Average LGD		Average maturity (years)		RWA		RWA density[4]
	1	0.00 to <0.15	%	$ 128,548		0.05	%	3,034	2.97	%	0.4	$ 1,541		1.20	%
	2	0.15 to <0.25		23,996		0.19		1,601	2.11		0.3	380		1.58	
	3	0.25 to <0.50		3,418		0.41		825	6.20		0.3	232		6.79	
	4	0.50 to <0.75		832		0.72		246	5.42		0.8	89		10.70	
	5	0.75 to <2.50		15,056		2.18		478	1.35		0.5	484		3.21	
	6	2.50 to <10.00[5]		n/a		n/a		n/a	n/a		n/a	n/a		n/a	
	7	10.00 to <100.00		22		24.07		34	17.51		1.9	20		90.91	
	8	100.00 (Default)		–		–		2	–		–	–		–	
	9	Total	$	171,872		0.27	%	6,220	2.79	%	0.4	$ 2,746		1.60	%

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

CCR Exposures by Portfolio and PD Scale (CCR4) – Sovereign[1]

($ millions, except as noted)
As at

LINE #	PD scale[2]	EAD post-CRM	Average PD	Number of obligors[3]	Average LGD	Average maturity (years)	RWA	RWA density[4]
	2019 Q3							
1	**0.00 to <0.15 % $**	**43,517**	**0.02 %**	**177**	**2.38 %**	**0.7 $**	**100**	**0.23 %**
2	**0.15 to <0.25**	**270**	**0.16**	**17**	**7.31**	**1.0**	**12**	**4.44**
3	**0.25 to <0.50**	**16**	**0.41**	**5**	**30.76**	**3.0**	**6**	**37.50**
4	**0.50 to <0.75**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
5	**0.75 to <2.50**	**4**	**1.91**	**8**	**25.51**	**1.0**	**2**	**50.00**
6	**2.50 to <10.00**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
7	**10.00 to <100.00**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
8	**100.00 (Default)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
9	**Total $**	**43,807**	**0.02 %**	**207**	**2.42 %**	**0.7 $**	**120**	**0.27 %**
	2019 Q2							
10	0.00 to <0.15 % $	48,675	0.02 %	178	2.35 %	0.8 $	128	0.26 %
11	0.15 to <0.25	1,182	0.16	19	1.63	0.1	11	0.93
12	0.25 to <0.50	44	0.47	5	4.04	0.7	3	6.82
13	0.50 to <0.75	–	–	–	–	–	–	–
14	0.75 to <2.50	9	2.16	7	13.00	1.0	3	33.33
15	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16	10.00 to <100.00	–	–	–	–	–	–	–
17	100.00 (Default)	–	–	–	–	–	–	–
18	Total $	49,910	0.02 %	209	2.34 %	0.8 $	145	0.29 %
	2019 Q1							
19	0.00 to <0.15 % $	47,053	0.02 %	167	2.74 %	0.9 $	136	0.29 %
20	0.15 to <0.25	810	0.16	20	1.44	0.1	6	0.74
21	0.25 to <0.50	124	0.47	4	3.65	–	4	3.23
22	0.50 to <0.75	3	0.72	1	13.00	1.0	1	33.33
23	0.75 to <2.50	8	2.02	7	24.10	1.0	4	50.00
24	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
25	10.00 to <100.00	–	–	–	–	–	–	–
26	100.00 (Default)	–	–	–	–	–	–	–
27	Total $	47,998	0.02 %	199	2.72 %	0.8 $	151	0.31 %

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

CCR Exposures by Portfolio and PD Scale (CCR4) – Sovereign (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4											
		PD scale[2]		EAD post-CRM	Average PD		Number of obligors[3]	Average LGD		Average maturity (years)		RWA	RWA density[4]	
	1	0.00 to <0.15	%	$ 39,576	0.02	%	179	4.47	%	1.2	$	107	0.27	%
	2	0.15 to <0.25		645	0.16		15	1.29		0.1		4	0.62	
	3	0.25 to <0.50		83	0.47		5	1.23		–		1	1.20	
	4	0.50 to <0.75		–	0.72		1	55.00		1.0		–	–	
	5	0.75 to <2.50		1	2.16		4	11.57		1.0		–	–	
	6	2.50 to <10.00[5]		n/a	n/a		n/a	n/a		n/a		n/a	n/a	
	7	10.00 to <100.00		–	–		–	–		–		–	–	
	8	100.00 (Default)		–	–		–	–		–		–	–	
	9	Total	$	40,305	0.02	%	204	4.41	%	1.2	$	112	0.28	%

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

CCR Exposures by Portfolio and PD Scale (CCR4) Bank[1]

($ millions, except as noted)
As at

2019 Q3

LINE #	PD scale[2]	EAD post-CRM	Average PD	Number of obligors[3]	Average LGD	Average maturity (years)	RWA	RWA density[4]
1	**0.00 to <0.15**	**$ 108,462**	**0.05 %**	**336**	**12.14 %**	**0.5**	**$ 3,856**	**3.56 %**
2	**0.15 to <0.25**	**2,103**	**0.17**	**56**	**14.67**	**0.4**	**200**	**9.51**
3	**0.25 to <0.50**	**40**	**0.33**	**16**	**16.97**	**1.3**	**10**	**25.00**
4	**0.50 to <0.75**	**1**	**0.71**	**4**	**12.16**	**4.5**	**–**	**–**
5	**0.75 to <2.50**	**5**	**1.34**	**5**	**14.56**	**0.9**	**2**	**40.00**
6	**2.50 to <10.00**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
7	**10.00 to <100.00**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
8	**100.00 (Default)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
9	**Total**	**$ 110,611**	**0.05 %**	**417**	**12.19 %**	**0.5**	**$ 4,068**	**3.68 %**

2019 Q2

	PD scale[2]	EAD post-CRM	Average PD	Number of obligors[3]	Average LGD	Average maturity (years)	RWA	RWA density[4]
10	0.00 to <0.15	$ 93,754	0.05 %	321	13.30 %	0.5	$ 3,829	4.08 %
11	0.15 to <0.25	2,716	0.17	52	10.25	0.5	191	7.03
12	0.25 to <0.50	109	0.32	16	11.21	0.8	15	13.76
13	0.50 to <0.75	1	0.72	2	16.11	5.0	–	–
14	0.75 to <2.50	17	1.19	7	7.10	0.3	3	17.65
15	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16	10.00 to <100.00	1	10.63	1	55.00	3.8	3	300.00
17	100.00 (Default)	–	–	–	–	–	–	–
18	Total	$ 96,598	0.05 %	399	13.21 %	0.5	$ 4,041	4.18 %

2019 Q1

	PD scale[2]	EAD post-CRM	Average PD	Number of obligors[3]	Average LGD	Average maturity (years)	RWA	RWA density[4]
19	0.00 to <0.15	$ 81,105	0.05 %	322	16.42 %	0.5	$ 3,806	4.69 %
20	0.15 to <0.25	1,479	0.18	54	11.39	0.5	114	7.71
21	0.25 to <0.50	128	0.34	17	13.37	0.7	21	16.41
22	0.50 to <0.75	–	0.72	1	10.50	5.0	–	–
23	0.75 to <2.50	282	2.27	8	46.23	0.1	275	97.52
24	2.50 to <10.00[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
25	10.00 to <100.00	1	10.63	1	55.00	4.1	3	300.00
26	100.00 (Default)	–	–	–	–	–	–	–
27	Total	$ 82,995	0.06 %	403	16.43 %	0.5	$ 4,219	5.08 %

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

CCR Exposures by Portfolio and PD Scale (CCR4) **Bank** (Continued)[1]

($ millions, except as noted) *As at*	LINE #	2018 Q4														
		PD scale[2]		EAD post-CRM		Average PD		Number of obligors[3]	Average LGD		Average maturity (years)		RWA	RWA density[4]	
	1	0.00 to <0.15	%	$ 90,392		0.05	%	364	12.87	%	0.5	$	3,603	3.99	%
	2	0.15 to <0.25		1,544		0.16		66	9.66		0.7		119	7.71	
	3	0.25 to <0.50		89		0.35		17	12.54		0.8		13	14.61	
	4	0.50 to <0.75		–		0.72		8	21.44		4.0		–	–	
	5	0.75 to <2.50		275		2.32		11	49.13		0.1		284	103.27	
	6	2.50 to <10.00[5]		n/a		n/a		n/a	n/a		n/a		n/a	n/a	
	7	10.00 to <100.00		–		10.63		1	55.00		4.3		1	–	
	8	100.00 (Default)		–		–		–	–		–		–	–	
	9	Total	$	92,300		0.06	%	467	12.92	%	0.5	$	4,020	4.36	%

[1] Collateral for repo-style transactions is reflected in the LGD as opposed to EAD.
[2] Prescribed PD bands based on Pillar 3 disclosure requirements by BCBS.
[3] Total number of obligors is total number of unique borrowers, and may not add as certain borrowers may be represented in more than one PD scale.
[4] Total RWA as a percentage of post-CRM EAD.
[5] No internal BRR mapped to the prescribed PD range.

Composition of Collateral for CCR Exposure (CCR5)

($ millions)	LINE	2019						2019					
As at	#	Q3											
		Collateral used in derivative transactions				Collateral used in SFTs		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	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated			Segregated	Unsegregated	Segregated	Unsegregated		
Cash – domestic currency	1	$ 298	$ 1,961	$ –	$ 1,280	$ 41,174	$ 60,879	$ 124	$ 2,975	$ –	$ 757	$ 40,647	$ 67,651
Cash – other currencies	2	129	4,779	558	8,311	63,193	104,454	309	4,053	3	5,989	51,754	86,359
Domestic sovereign debt	3	91	617	580	1,200	71,944	47,022	–	1,067	1	794	76,487	48,852
Other sovereign debt	4	1,385	957	1,499	2,465	80,101	72,672	973	244	1,512	4,154	71,189	67,838
Corporate bonds	5	189	299	655	194	8,812	12,553	139	374	–	35	5,280	5,643
Equity securities	6	18	1	–	–	31,031	71,785	5	3	–	–	23,940	52,421
Other collateral	7	2	31	169	1,149	31,356	46,553	35	43	488	841	27,889	43,951
Total	8	$ 2,112	$ 8,645	$ 3,461	$ 14,599	$ 327,611	$ 415,918	$ 1,585	$ 8,759	$ 2,004	$ 12,570	$ 297,186	$ 372,715

		2019						2018					
		Q1						Q4					
		Collateral used in derivative transactions				Collateral used in SFTs		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	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated			Segregated	Unsegregated	Segregated	Unsegregated		
Cash – domestic currency	9	$ –	$ 2,395	$ –	$ 927	$ 31,962	$ 48,235	$ 373	$ 2,543	$ –	$ 448	$ 32,184	$ 47,566
Cash – other currencies	10	50	4,091	–	6,136	48,758	93,861	320	6,708	3	6,165	64,131	102,988
Domestic sovereign debt	11	–	214	28	739	52,073	33,971	–	393	18	421	60,390	41,941
Other sovereign debt	12	1,004	611	1,058	3,623	67,434	57,992	466	569	761	4,077	72,186	68,111
Corporate bonds	13	274	203	–	–	6,718	7,634	39	334	–	–	5,188	7,113
Equity securities	14	–	7	–	–	26,802	43,797	30	5	–	–	27,819	47,777
Other collateral	15	4	51	181	143	24,230	36,363	1	482	–	76	22,569	36,869
Total	16	$ 1,332	$ 7,572	$ 1,267	$ 11,568	$ 257,977	$ 321,853	$ 1,229	$ 11,034	$ 782	$ 11,187	$ 284,467	$ 352,365

Credit Derivatives Exposures (CCR6)

($ millions) *As at*	LINE #	2019 Q3		2019 Q2		2019 Q1		2018 Q4	
		Protection bought	**Protection sold**	Protection bought	Protection sold	Protection bought	Protection sold	Protection bought	Protection sold
Notionals									
Single-name credit default swaps	1	**$ 5,018**	**$ 848**	$ 5,423	$ 827	$ 5,597	$ 677	$ 5,316	$ 698
Index credit default swaps	2	**6,352**	**374**	6,248	33	7,274	1,159	6,723	423
Total return swaps	3	**–**	**–**	–	–	–	–	–	–
Credit options	4	**–**	**–**	–	–	–	–	–	–
Other credit derivatives	5	**4,898**	**–**	6,187	–	4,998	–	3,179	–
Total notionals	6	**16,268**	**1,222**	17,858	860	17,869	1,836	15,218	1,121
Fair values									
Positive fair value (asset)	7	**19**	**38**	7	44	12	55	12	35
Negative fair value (liability)	8	**(426)**	**(1)**	(484)	(2)	(427)	(2)	(408)	(1)

Exposures to Central Counterparties (CCR8)[1]

($ millions) *As at*	LINE #	2019 Q3		2019 Q2		2019 Q1		2018 Q4	
		EAD post-CRM	**RWA**	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA
Exposures to QCCPs (total)	1	**$**	**$ 643**	$	$ 619	$	$ 765	$	$ 3,362
Exposures for trades at QCCPs (excluding initial margin and default fund contributions) – of which:	2	**18,546**	**371**	17,545	351	21,201	424	19,029	1,490
(i) OTC derivatives	3	***10,569***	***211***	*11,415*	*228*	*15,555*	*311*	*12,181*	*608*
(ii) Exchange-traded derivatives	4	***2,307***	***46***	*1,599*	*32*	*1,730*	*35*	*2,151*	*102*
(iii) Securities financing transactions	5	***5,670***	***114***	*4,531*	*91*	*3,916*	*78*	*4,697*	*780*
(iv) Netting sets where cross-product netting has been approved	6	**–**	**–**	–	–	–	–	–	–
Segregated initial margin	7	**91**		–		–		–	
Non-segregated initial margin	8	**2,510**	**–**	3,067	–	3,163	–	3,540	441
Pre-funded default fund contributions	9	**796**	**272**	768	268	720	341	781	1,431
Unfunded default fund contributions	10	**–**	**–**	–	–	–	–	–	–

[1] The Bank does not have any exposure to non-qualifying central counterparties.

Derivatives – Notional

($ millions) As at	LINE #	2019 Q3 Trading Over-the-counter[1] Clearing house[2]	2019 Q3 Trading Over-the-counter[1] Non-clearing house	2019 Q3 Trading Exchange-traded	2019 Q3 Trading Total	2019 Q3 Non-trading	2019 Q3 Total	2019 Q2 Trading Over-the-counter[1] Clearing house[2]	2019 Q2 Trading Over-the-counter[1] Non-clearing house	2019 Q2 Trading Exchange-traded	2019 Q2 Trading Total	2019 Q2 Non-trading	2019 Q2 Total
Interest Rate Contracts													
Futures	1	$ –	$ –	$ 913,817	$ 913,817	$ –	$ 913,817	$ –	$ –	$ 882,220	$ 882,220	$ –	$ 882,220
Forward rate agreements	2	1,492,079	24,716	–	1,516,795	583	1,517,378	1,311,666	42,687	–	1,354,353	462	1,354,815
Swaps	3	9,322,087	410,500	–	9,732,587	1,594,499	11,327,086	8,157,205	448,310	–	8,605,515	1,556,437	10,161,952
Options written	4	–	100,956	106,405	207,361	567	207,928	–	86,636	95,986	182,622	389	183,011
Options purchased	5	–	100,873	152,856	253,729	6,239	259,968	–	77,860	118,050	195,910	5,798	201,708
	6	10,814,166	637,045	1,173,078	12,624,289	1,601,888	14,226,177	9,468,871	655,493	1,096,256	11,220,620	1,563,086	12,783,706
Foreign Exchange Contracts													
Futures	7	–	–	24	24	–	24	–	–	24	24	–	24
Forward contracts	8	–	264,485	–	264,485	20,792	285,277	–	1,946,804	–	1,946,804	22,354	1,969,158
Swaps	9	–	1,441,619	–	1,441,619	2,376	1,443,995	–	6	–	6	–	6
Cross-currency interest rate swaps	10	–	733,280	–	733,280	100,724	834,004	–	728,013	–	728,013	99,313	827,326
Options written	11	–	29,601	–	29,601	–	29,601	–	29,369	–	29,369	–	29,369
Options purchased	12	–	30,533	16	30,549	–	30,549	–	29,416	–	29,416	–	29,416
	13	–	2,499,518	40	2,499,558	123,892	2,623,450	–	2,733,608	24	2,733,632	121,667	2,855,299
Credit Derivative Contracts													
Credit default swaps													
Protection purchased	14	9,116	168	–	9,284	2,939	12,223	9,188	215	–	9,403	2,953	12,356
Protection sold	15	1,125	97	–	1,222	–	1,222	753	107	–	860	–	860
	16	10,241	265	–	10,506	2,939	13,445	9,941	322	–	10,263	2,953	13,216
Other Contracts													
Equity contracts	17	–	83,546	69,004	152,550	29,507	182,057	–	66,898	58,972	125,870	29,466	155,336
Commodity contracts	18	108	48,631	49,371	98,110	–	98,110	114	39,910	35,873	75,897	–	75,897
	19	108	132,177	118,375	250,660	29,507	280,167	114	106,808	94,845	201,767	29,466	231,233
Total	20	$ 10,824,515	$ 3,269,005	$ 1,291,493	$ 15,385,013	$ 1,758,226	$ 17,143,239	$ 9,478,926	$ 3,496,231	$ 1,191,125	$ 14,166,282	$ 1,717,172	$ 15,883,454

		2019 Q1 Trading Over-the-counter[1] Clearing house[2]	2019 Q1 Trading Over-the-counter[1] Non-clearing house	2019 Q1 Trading Exchange-traded	2019 Q1 Trading Total	2019 Q1 Non-trading	2019 Q1 Total	2018 Q4 Trading Over-the-counter[1] Clearing house[2]	2018 Q4 Trading Over-the-counter[1] Non-clearing house	2018 Q4 Trading Exchange-traded	2018 Q4 Trading Total	2018 Q4 Non-trading	2018 Q4 Total
Interest Rate Contracts													
Futures	21	$ –	$ –	$ 996,714	$ 996,714	$ –	$ 996,714	$ –	$ –	$ 575,825	$ 575,825	$ –	$ 575,825
Forward rate agreements	22	1,228,118	53,332	–	1,281,450	163	1,281,613	919,623	51,056	–	970,679	225	970,904
Swaps	23	7,877,245	432,609	–	8,309,854	1,421,591	9,731,445	7,580,152	444,065	–	8,024,217	1,418,487	9,442,704
Options written	24	–	72,375	86,178	158,553	210	158,763	–	79,649	121,246	200,895	53	200,948
Options purchased	25	–	63,987	113,291	177,278	2,570	179,848	–	70,201	154,683	224,884	2,891	227,775
	26	9,105,363	622,303	1,196,183	10,923,849	1,424,534	12,348,383	8,499,775	644,971	851,754	9,996,500	1,421,656	11,418,156
Foreign Exchange Contracts													
Futures	27	–	–	24	24	–	24	–	–	24	24	–	24
Forward contracts	28	–	1,846,690	–	1,846,690	26,794	1,873,484	–	1,796,542	–	1,796,542	29,140	1,825,682
Swaps	29	–	6	–	6	–	6	–	6	–	6	–	6
Cross-currency interest rate swaps	30	–	707,497	–	707,497	96,900	804,397	–	688,980	–	688,980	96,966	785,946
Options written	31	–	35,325	–	35,325	–	35,325	–	34,090	–	34,090	–	34,090
Options purchased	32	–	34,856	–	34,856	–	34,856	–	32,655	–	32,655	–	32,655
	33	–	2,624,374	24	2,624,398	123,694	2,748,092	–	2,552,273	24	2,552,297	126,106	2,678,403
Credit Derivative Contracts													
Credit default swaps													
Protection purchased	34	10,230	183	–	10,413	2,974	13,387	9,665	202	–	9,867	2,745	12,612
Protection sold	35	1,716	120	–	1,836	–	1,836	987	135	–	1,122	–	1,122
	36	11,946	303	–	12,249	2,974	15,223	10,652	337	–	10,989	2,745	13,734
Other Contracts													
Equity contracts	37	–	62,314	49,811	112,125	29,841	141,966	–	57,736	57,161	114,897	30,430	145,327
Commodity contracts	38	186	37,488	27,429	65,103	–	65,103	150	33,161	39,882	73,193	–	73,193
	39	186	99,802	77,240	177,228	29,841	207,069	150	90,897	97,043	188,090	30,430	218,520
Total	40	$ 9,117,495	$ 3,346,782	$ 1,273,447	$ 13,737,724	$ 1,581,043	$ 15,318,767	$ 8,510,577	$ 3,288,478	$ 948,821	$ 12,747,876	$ 1,580,937	$ 14,328,813

[1] Collateral held under a Credit Support Annex (CSA) to help reduce CCR is in the form of high-quality and liquid assets such as cash and high-quality government securities. Acceptable collateral is governed by the Collateralized Trading Policy.

[2] Derivatives executed through a central clearing house reduces settlement risk due to the ability to net settle offsetting positions for capital purposes and therefore receive preferential capital treatment compared to those settled with non-central clearing house counterparties.

Derivatives Notional (Continued)

($ millions) As at	LINE #	2018 Q3					
		Trading					
		Over-the-counter[1]					
		Clearing house[2]	Non-clearing house	Exchange-traded	Total	Non-trading	Total
Interest Rate Contracts							
Futures	1	$ –	$ –	$ 965,006	$ 965,006	$ –	$ 965,006
Forward rate agreements	2	828,170	89,694	–	917,864	201	918,065
Swaps	3	7,248,333	450,204	–	7,698,537	1,399,687	9,098,224
Options written	4	–	60,547	109,636	170,183	242	170,425
Options purchased	5	–	58,626	121,267	179,893	3,507	183,400
	6	8,076,503	659,071	1,195,909	9,931,483	1,403,637	11,335,120
Foreign Exchange Contracts							
Futures	7	–	–	9	9	–	9
Forward contracts	8	–	1,672,277	–	1,672,277	31,235	1,703,512
Swaps	9	–	–	–	–	–	–
Cross-currency interest rate swaps	10	–	650,760	–	650,760	88,161	738,921
Options written	11	–	32,623	–	32,623	–	32,623
Options purchased	12	–	31,298	–	31,298	–	31,298
	13	–	2,386,958	9	2,386,967	119,396	2,506,363
Credit Derivative Contracts							
Credit default swaps							
Protection purchased	14	10,054	255	–	10,309	2,657	12,966
Protection sold	15	1,739	135	–	1,874	–	1,874
	16	11,793	390	–	12,183	2,657	14,840
Other Contracts							
Equity contracts	17	–	49,368	39,454	88,822	31,206	120,028
Commodity contracts	18	101	33,138	27,059	60,298	–	60,298
	19	101	82,506	66,513	149,120	31,206	180,326
Total	20	$ 8,088,397	$ 3,128,925	$ 1,262,431	$ 12,479,753	$ 1,556,896	$ 14,036,649

[1] Collateral held under a CSA to help reduce CCR is in the form of high-quality and liquid assets such as cash and high-quality government securities. Acceptable collateral is governed by the Collateralized Trading Policy.
[2] Derivatives executed through a central clearing house reduces settlement risk due to the ability to net settle offsetting positions for capital purposes and therefore receive preferential capital treatment compared to those settled with non-central clearing house counterparties.

Derivatives – Credit Exposure[1,2]

($ millions) As at	LINE #	2019 Q3 Current replacement cost[3]	2019 Q3 Credit equivalent amount	2019 Q3 Risk-weighted amount	2019 Q2 Current replacement cost[3]	2019 Q2 Credit equivalent amount	2019 Q2 Risk-weighted amount	2019 Q1 Current replacement cost[3]	2019 Q1 Credit equivalent amount	2019 Q1 Risk-weighted amount
Interest Rate Contracts										
Forward rate agreements	1	**$ 30**	**$ 316**	**$ 231**	$ 19	$ 483	$ 423	$ 34	$ 282	$ 194
Swaps	2	**3,607**	**10,000**	**1,821**	4,284	11,119	1,763	4,616	11,474	1,683
Options purchased	3	**156**	**456**	**107**	113	354	87	109	367	115
	4	**3,793**	**10,772**	**2,159**	4,416	11,956	2,273	4,759	12,123	1,992
Foreign Exchange Contracts										
Forward contracts	5	**1,072**	**4,808**	**777**	2,193	18,013	2,287	3,845	19,483	2,236
Swaps	6	**2,367**	**13,376**	**1,449**	1	91	18	–	99	18
Cross-currency interest rate swaps	7	**1,821**	**10,057**	**1,227**	1,815	10,165	1,255	1,989	10,059	1,266
Options purchased	8	**75**	**434**	**88**	83	453	89	71	655	119
	9	**5,335**	**28,675**	**3,541**	4,092	28,722	3,649	5,905	30,296	3,639
Other Contracts										
Credit derivatives	10	**4**	**672**	**160**	7	763	180	5	714	166
Equity contracts	11	**211**	**5,925**	**723**	316	5,275	620	205	4,723	598
Commodity contracts	12	**481**	**3,626**	**707**	373	2,852	636	341	2,734	579
	13	**696**	**10,223**	**1,590**	696	8,890	1,436	551	8,171	1,343
Total net derivatives	14	**9,824**	**49,670**	**7,290**	9,204	49,568	7,358	11,215	50,590	6,974
Qualifying Central Counterparty (QCCP) contracts[4]	15	**3,038**	**12,876**	**366**	3,664	13,014	383	4,216	17,302	545
Total	16	**$ 12,862**	**$ 62,546**	**$ 7,656**	$ 12,868	$ 62,582	$ 7,741	$ 15,431	$ 67,892	$ 7,519

		2018 Q4 Current replacement cost[3]	2018 Q4 Credit equivalent amount	2018 Q4 Risk-weighted amount	2018 Q3 Current replacement cost[3]	2018 Q3 Credit equivalent amount	2018 Q3 Risk-weighted amount
Interest Rate Contracts							
Forward rate agreements	17	$ 21	$ 56	$ 15	$ 34	$ 119	$ 41
Swaps	18	11,630	15,557	4,193	12,114	16,065	4,613
Options purchased	19	508	776	299	490	723	313
	20	12,159	16,389	4,507	12,638	16,907	4,967
Foreign Exchange Contracts							
Forward contracts	21	17,605	35,543	4,247	12,350	30,025	3,818
Swaps	22	–	–	–	63	–	–
Cross-currency interest rate swaps	23	21,218	40,942	7,012	18,861	37,380	6,503
Options purchased	24	486	1,029	212	381	925	202
	25	39,309	77,514	11,471	31,655	68,330	10,523
Other Contracts							
Credit derivatives	26	3	358	145	4	345	136
Equity contracts	27	3,043	7,383	920	1,093	4,979	761
Commodity contracts	28	1,101	2,546	514	1,184	2,752	588
	29	4,147	10,287	1,579	2,281	8,076	1,485
Total derivatives	30	55,615	104,190	17,557	46,574	93,313	16,975
Less: impact of master netting agreements	31	34,205	54,039	11,464	29,622	49,365	11,199
Total after netting	32	21,410	50,151	6,093	16,952	43,948	5,776
Less: impact of collateral	33	8,884	9,602	1,173	6,757	7,342	912
Net	34	12,526	40,549	4,920	10,195	36,606	4,864
QCCP contracts[4]	35	155	14,332	2,058	3,170	16,704	1,871
Total	36	$ 12,681	$ 54,881	$ 6,978	$ 13,365	$ 53,310	$ 6,735

[1] Certain comparative amounts have been recast to conform with the presentation adopted in the current period.
[2] As of the first quarter of 2019, the standardized approach for counterparty credit risk (SA-CCR) was implemented in determining the calculation of replacement costs, credit equivalent amount and RWA which includes the impact of master netting agreements and collateral. Under the previous methodology these impacts were presented separately.
[3] Non-trading credit derivatives, which are given financial guarantee treatment for credit risk capital purposes, were excluded in accordance with OSFI's guidelines.
[4] RWA for OSFI "deemed" QCCP derivative exposures are calculated in accordance with the Basel III regulatory framework, which takes into account both trade exposures and default fund exposures relating to derivatives, are presented based on the "all-in" methodology. The amounts calculated are net of master netting agreements and collateral.

Securitization Exposures in the Banking Book (SEC1)[1]

($ millions) As at	LINE #	2019 Q3			2019 Q2			2019 Q1			2018 Q4		
		Bank acts as originator/sponsor Traditional	**Bank acts as investor Traditional**	**Total**	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total
Retail (total) – of which:	1	**$ 23,877**	**$ 37,616**	**$ 61,493**	$ 23,424	$ 39,988	$ 63,412	$ 22,843	$ 39,155	$ 61,998	$ 22,858	$ 41,927	$ 64,785
Residential mortgage	2	***9,508***	***444***	***9,952***	*9,663*	*494*	*10,157*	*9,655*	*610*	*10,265*	*9,775*	*889*	*10,664*
Credit card	3	***1,707***	***16,167***	***17,874***	*1,726*	*17,758*	*19,484*	*1,477*	*18,102*	*19,579*	*1,524*	*18,212*	*19,736*
Other retail exposures	4	***12,662***	***21,005***	***33,667***	*12,035*	*21,736*	*33,771*	*11,711*	*20,443*	*32,154*	*11,559*	*22,819*	*34,378*
Re-securitization	5	**–**	**–**	**–**	–	–	–	–	–	–	–	*7*	*7*
Wholesale (total) – of which:	6	**8,376**	**25,164**	**33,540**	7,123	24,849	31,972	6,863	23,833	30,696	6,979	21,576	28,555
Loans to corporates	7	**–**	***3,846***	***3,846***	–	*3,418*	*3,418*	–	*3,036*	*3,036*	–	*2,785*	*2,785*
Commercial mortgage	8	**–**	***15,980***	***15,980***	–	*16,351*	*16,351*	–	*15,941*	*15,941*	–	*17,265*	*17,265*
Lease and receivables	9	***8,376***	***5,338***	***13,714***	*7,123*	*5,080*	*12,203*	*6,863*	*4,856*	*11,719*	*6,979*	*1,526*	*8,505*
Other wholesale	10	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Re-securitization	11	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–

Securitization Exposures in the Trading Book (SEC2)[1]

($ millions) As at	LINE #	2019 Q3			2019 Q2			2019 Q1			2018 Q4		
		Bank acts as originator/sponsor Traditional	**Bank acts as investor Traditional**	**Total**	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total	Bank acts as originator/sponsor Traditional	Bank acts as investor Traditional	Total
Retail (total) – of which:	1	**$ –**	**$ 787**	**$ 787**	$ –	$ 786	$ 786	$ –	$ 625	$ 625	$ –	$ 636	$ 636
Residential mortgage	2	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Credit card	3	**–**	***19***	***19***	–	*115*	*115*	–	*142*	*142*	–	*53*	*53*
Other retail exposures	4	**–**	***768***	***768***	–	*671*	*671*	–	*483*	*483*	–	*583*	*583*
Re-securitization	5	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Wholesale (total) – of which:	6	**–**	**76**	**76**	–	52	52	–	28	28	–	146	146
Loans to corporates	7	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Commercial mortgage	8	**–**	***1***	***1***	–	*1*	*1*	–	*1*	*1*	–	*1*	*1*
Lease and receivables	9	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–
Other wholesale	10	**–**	***75***	***75***	–	*51*	*51*	–	*27*	*27*	–	*145*	*145*
Re-securitization	11	**–**	**–**	**–**	–	–	–	–	–	–	–	–	–

[1] The Bank does not have any synthetic securitization exposures.

Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements – Bank Acting as Originator or as Sponsor (SEC3)[1,2]

($ millions) As at	LINE #	2019 Q3																			
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	1	$ 30,921	$ 876	$ 305	$ 143	$ 8	$ –	$ 32,245	$ –	$ 8	$ –	$ 4,202	$ –	$ 104	$ –	$ 311	$ –	$ 8
of which: securitization	2	*30,921*	*876*	*305*	*143*	*8*	*–*	*32,245*	*–*	*8*	*–*	*4,202*	*–*	*104*	*–*	*311*	*–*	*8*
of which: retail underlying	3	*22,889*	*654*	*184*	*143*	*8*	*–*	*23,869*	*–*	*8*	*–*	*3,161*	*–*	*104*	*–*	*228*	*–*	*8*
of which: wholesale	4	*8,032*	*222*	*121*	*–*	*–*	*–*	*8,376*	*–*	*–*	*–*	*1,041*	*–*	*–*	*–*	*83*	*–*	*–*
of which: re-securitization	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	8	$ 30,921	$ 876	$ 305	$ 143	$ 8	$ –	$ 32,245	$ –	$ 8	$ –	$ 4,202	$ –	$ 104	$ –	$ 311	$ –	$ 8

		2019 Q2																
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	9	$ 29,278	$ 745	$ 332	$ 184	$ 9	$ –	$ 30,539	$ –	$ 9	$ –	$ 4,046	$ –	$ 111	$ –	$ 297	$ –	$ 9
of which: securitization	10	*29,278*	*745*	*332*	*184*	*9*	*–*	*30,539*	*–*	*9*	*–*	*4,046*	*–*	*111*	*–*	*297*	*–*	*9*
of which: retail underlying	11	*22,348*	*685*	*199*	*184*	*9*	*–*	*23,416*	*–*	*9*	*–*	*3,153*	*–*	*111*	*–*	*226*	*–*	*9*
of which: wholesale	12	*6,930*	*60*	*133*	*–*	*–*	*–*	*7,123*	*–*	*–*	*–*	*893*	*–*	*–*	*–*	*71*	*–*	*–*
of which: re-securitization	13	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	16	$ 29,278	$ 745	$ 332	$ 184	$ 9	$ –	$ 30,539	$ –	$ 9	$ –	$ 4,046	$ –	$ 111	$ –	$ 297	$ –	$ 9

		2019 Q1																
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%	IRBA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	17	$ 28,032	$ 1,061	$ 447	$ 156	$ 10	$ –	$ 29,696	$ –	$ 10	$ –	$ 3,940	$ –	$ 125	$ –	$ 286	$ –	$ 10
of which: securitization	18	*28,032*	*1,061*	*447*	*156*	*10*	*–*	*29,696*	*–*	*10*	*–*	*3,940*	*–*	*125*	*–*	*286*	*–*	*10*
of which: retail underlying	19	*21,405*	*979*	*293*	*156*	*10*	*–*	*22,833*	*–*	*10*	*–*	*3,052*	*–*	*125*	*–*	*215*	*–*	*10*
of which: wholesale	20	*6,627*	*82*	*154*	*–*	*–*	*–*	*6,863*	*–*	*–*	*–*	*888*	*–*	*–*	*–*	*71*	*–*	*–*
of which: re-securitization	21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	22	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	24	$ 28,032	$ 1,061	$ 447	$ 156	$ 10	$ –	$ 29,696	$ –	$ 10	$ –	$ 3,940	$ –	$ 125	$ –	$ 286	$ –	$ 10

		2018 Q4																
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%
Total exposures																		
Traditional securitization	25	$ 29,725	$ –	$ 103	$ –	$ 9	$ 29,837	$ –	$ –	$ –	$ 2,313	$ –	$ –	$ –	$ 185	$ –	$ –	$ –
of which: securitization	26	*29,725*	*–*	*103*	*–*	*9*	*29,837*	*–*	*–*	*–*	*2,313*	*–*	*–*	*–*	*185*	*–*	*–*	*–*
of which: retail underlying	27	*22,746*	*–*	*103*	*–*	*9*	*22,858*	*–*	*–*	*–*	*1,735*	*–*	*–*	*–*	*139*	*–*	*–*	*–*
of which: wholesale	28	*6,979*	*–*	*–*	*–*	*–*	*6,979*	*–*	*–*	*–*	*578*	*–*	*–*	*–*	*46*	*–*	*–*	*–*
of which: re-securitization	29	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	31	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	32	$ 29,725	$ –	$ 103	$ –	$ 9	$ 29,837	$ –	$ –	$ –	$ 2,313	$ –	$ –	$ –	$ 185	$ –	$ –	$ –

[1] The Bank does not have any synthetic securitization exposures.
[2] As of the first quarter of 2019, the regulatory approaches have been updated to reflect the implementation of the new securitization framework.
[3] RWA before application of cap.

Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements – Bank Acting as Investor (SEC4)[1,2]

($ millions) As at	LINE #	2019 Q3																			
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	1	$ 61,463	$ 1,317	$ –	$ –	$ –	$ –	$ 62,456	$ 324	$ –	$ –	$ 9,517	$ 49	$ –	$ –	$ 711	$ 4	$ –
of which: securitization	2	*61,463*	*1,317*	–	–	–	–	*62,456*	*324*	–	–	*9,517*	*49*	–	–	*711*	*4*	–
of which: retail underlying	3	*36,298*	*1,317*	–	–	–	–	*37,605*	*11*	–	–	*4,798*	*1*	–	–	*334*	–	–
of which: wholesale	4	*25,165*	–	–	–	–	–	*24,851*	*313*	–	–	*4,719*	*48*	–	–	*377*	*4*	–
of which: re-securitization	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	8	$ 61,463	$ 1,317	$ –	$ –	$ –	$ –	$ 62,456	$ 324	$ –	$ –	$ 9,517	$ 49	$ –	$ –	$ 711	$ 4	$ –

		2019 Q2																			
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	9	$ 63,610	$ 1,226	$ –	$ –	$ –	$ –	$ 64,473	$ 363	$ –	$ –	$ 9,659	$ 52	$ –	$ –	$ 730	$ 4	$ –
of which: securitization	10	*63,610*	*1,226*	–	–	–	–	*64,473*	*363*	–	–	*9,659*	*52*	–	–	*730*	*4*	–
of which: retail underlying	11	*38,761*	*1,226*	–	–	–	–	*39,942*	*45*	–	–	*4,965*	*10*	–	–	*355*	*1*	–
of which: wholesale	12	*24,849*	–	–	–	–	–	*24,531*	*318*	–	–	*4,694*	*42*	–	–	*375*	*3*	–
of which: re-securitization	13	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	16	$ 63,610	$ 1,226	$ –	$ –	$ –	$ –	$ 64,473	$ 363	$ –	$ –	$ 9,659	$ 52	$ –	$ –	$ 730	$ 4	$ –

		2019 Q1																			
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)[3]				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%	IBRA	ERBA/ IAA	SA	1250%
Total exposures																		
Traditional securitization	17	$ 62,266	$ 722	$ –	$ –	$ –	$ –	$ 62,988	$ –	$ –	$ –	$ 9,335	$ –	$ –	$ –	$ 703	$ –	$ –
of which: securitization	18	*62,266*	*722*	–	–	–	–	*62,988*	–	–	–	*9,335*	–	–	–	*703*	–	–
of which: retail underlying	19	*38,433*	*722*	–	–	–	–	*39,155*	–	–	–	*4,794*	–	–	–	*340*	–	–
of which: wholesale	20	*23,833*	–	–	–	–	–	*23,833*	–	–	–	*4,541*	–	–	–	*363*	–	–
of which: re-securitization	21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: senior	22	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
of which: non-senior	23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	24	$ 62,266	$ 722	$ –	$ –	$ –	$ –	$ 62,988	$ –	$ –	$ –	$ 9,335	$ –	$ –	$ –	$ 703	$ –	$ –

		2018 Q4																			
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
		</20% RW	>20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%	IRB RBA including IAA	IRB SFA	SA/ SSFA	1250%
Total exposures																		
Traditional securitization	25	$ 62,465	$ –	$ 694	$ 151	$ 193	$ 41,927	$ –	$ 21,576	$ –	$ 6,892	$ –	$ 4,315	$ –	$ 551	$ –	$ 345	$ –
of which: securitization	26	*62,465*	–	*694*	*144*	*193*	*41,920*	–	*21,576*	–	*6,841*	–	*4,315*	–	*547*	–	*345*	–
of which: retail underlying	27	*40,889*	–	*694*	*144*	*193*	*41,920*	–	–	–	*6,841*	–	–	–	*547*	–	–	–
of which: wholesale	28	*21,576*	–	–	–	–	–	–	*21,576*	–	–	–	*4,315*	–	–	–	*345*	–
of which: re-securitization	29	–	–	–	*7*	–	*7*	–	–	–	*51*	–	–	–	*4*	–	–	–
of which: senior	30	–	–	–	*7*	–	*7*	–	–	–	*51*	–	–	–	*4*	–	–	–
of which: non-senior	31	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	32	$ 62,465	$ –	$ 694	$ 151	$ 193	$ 41,927	$ –	$ 21,576	$ –	$ 6,892	$ –	$ 4,315	$ –	$ 551	$ –	$ 345	$ –

[1] The Bank does not have any synthetic securitization exposures.
[2] As of the first quarter of 2019, the regulatory approaches have been updated to reflect the implementation of the new securitization framework.
[3] RWA before application cap.

AIRB Credit Risk Exposures: Actual and Estimated Parameters

(Percentage) As at	LINE #	2019 Q3 Average Estimated PD[1]	2019 Q3 Actual Default Rate	2019 Q3 Average Estimated LGD[2]	2019 Q3 Actual LGD[3]	2019 Q3 Average Estimated EAD	2019 Q3 Actual EAD	2019 Q2 Average Estimated PD[1]	2019 Q2 Actual Default Rate	2019 Q2 Average Estimated LGD[2]	2019 Q2 Actual LGD[3]	2019 Q2 Average Estimated EAD	2019 Q2 Actual EAD
Retail													
Residential secured uninsured	1	**0.44 %**	**0.30 %**	**30.31 %**	**10.47 %**	**95.64 %**	**99.53 %**	0.46 %	0.30 %	29.96 %	9.73 %	96.05 %	100.27 %
Residential secured insured[4]	2	**0.44**	**0.30**	**n/a**	**n/a**	**98.74**	**99.38**	0.45	0.30	n/a	n/a	98.98	99.07
Qualifying revolving retail	3	**2.35**	**2.78**	**88.64**	**81.44**	**97.52**	**94.81**	2.44	2.77	88.38	81.34	97.90	94.74
Other retail	4	**2.58**	**2.03**	**56.22**	**46.54**	**99.39**	**92.88**	2.62	1.99	55.64	46.25	99.32	92.10
Non-Retail													
Corporate	5	**1.20**	**0.44**	**17.66**	**15.59**	**90.66**	**80.34**	1.24	0.38	17.78	18.84	90.67	72.01
Sovereign	6	**0.07**	**–**	**9.93**	**n/a**	**99.68**	**n/a**	0.07	–	9.56	n/a	99.72	n/a
Bank	7	**0.25**	**–**	**14.72**	**n/a**	**95.77**	**n/a**	0.21	–	16.08	n/a	95.93	n/a

	LINE #	2019 Q1 Average Estimated PD[1]	2019 Q1 Actual Default Rate	2019 Q1 Average Estimated LGD[2]	2019 Q1 Actual LGD[3]	2019 Q1 Average Estimated EAD	2019 Q1 Actual EAD	2018 Q4 Average Estimated PD[1]	2018 Q4 Actual Default Rate	2018 Q4 Average Estimated LGD[2]	2018 Q4 Actual LGD[3]	2018 Q4 Average Estimated EAD	2018 Q4 Actual EAD
Retail													
Residential secured uninsured	8	0.56 %	0.32 %	28.45 %	11.22 %	96.19 %	100.68 %	0.60 %	0.35 %	28.94 %	11.82 %	95.95 %	100.95 %
Residential secured insured[4]	9	0.44	0.27	n/a	n/a	99.40	99.29	0.43	0.26	n/a	n/a	99.33	99.36
Qualifying revolving retail	10	2.49	2.91	88.77	80.48	98.18	94.99	2.50	3.02	88.70	80.14	97.91	94.79
Other retail	11	2.57	1.99	54.88	45.23	99.34	91.42	2.52	1.99	54.87	46.10	99.32	91.44
Non-Retail													
Corporate	12	1.25	0.31	18.42	19.46	90.84	59.89	1.27	0.32	18.17	24.36	90.76	57.40
Sovereign	13	0.07	–	10.16	n/a	99.71	n/a	0.09	–	10.95	n/a	99.63	n/a
Bank	14	0.21	–	18.03	n/a	96.33	n/a	0.23	–	15.25	n/a	96.87	n/a

	LINE #	2018 Q3 Average Estimated PD[1]	2018 Q3 Actual Default Rate	2018 Q3 Average Estimated LGD[2]	2018 Q3 Actual LGD[3]	2018 Q3 Average Estimated EAD	2018 Q3 Actual EAD
Retail							
Residential secured uninsured	15	0.62 %	0.38 %	28.83 %	12.73 %	95.94 %	100.68 %
Residential secured insured[4]	16	0.43	0.26	n/a	n/a	99.34	99.36
Qualifying revolving retail	17	2.51	3.02	88.53	80.33	97.95	94.68
Other retail	18	2.47	1.98	53.39	45.08	99.30	91.35
Non-Retail							
Corporate	19	1.21	0.31	17.91	24.35	90.65	56.36
Sovereign	20	0.09	–	10.88	n/a	99.71	n/a
Bank	21	0.21	–	16.00	n/a	96.94	n/a

[1] Estimated PD reflects a one-year through-the-cycle time horizon and is based on long run economic conditions.
[2] Estimated LGD reflects loss estimates for the full portfolio under a severe downturn economic scenario.
[3] Represents average LGD of the impaired portfolio over trailing 12 months.
[4] LGD for the residential secured insured portfolio is n/a due to the effect of CRM from government backed entities.

Glossary – Basel

Risk-weighted assets (RWA)	• Used in the calculation of risk-based capital ratios, total risk-weighted assets are calculated for credit, operational, and market risks using the approaches described below. From fiscal 2014 to 2018, there were three different measures of RWA used for each capital ratio due to the different scalars used for the phase-in of the CVA. For fiscal 2018, the scalars for inclusion of CVA for CET1, Tier 1, and Total Capital RWA were 80%, 83%, and 86%, respectively. For fiscal 2019, the CVA has been fully phased-in.
Approaches used by the Bank to calculate RWA	
For Credit Risk	
Standardized Approach	• Under this approach, banks apply a standardized set of risk-weights to exposures, as prescribed by the regulator, to calculate credit risk capital requirements. Standardized risk-weights are based on external credit assessments, where available, and other risk-related factors, including exposure asset class and collateral.
Advanced Internal Ratings-Based (AIRB) Approach	• 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. Use of the AIRB approach is subject to supervisory approval.
For Operational Risk	
Advanced Measurement Approach (AMA)	• Under this approach, banks use their own internal operational risk measurement system with quantitative and qualitative criteria to calculate operational risk capital.
The Standardized Approach (TSA)	• Under this approach, banks apply prescribed factors to a three-year average of annual gross income for each of eight different business lines representing the different activities of the institution (such as, Corporate Finance, Retail Banking, Asset Management).
For Market Risk	
Standardized Approach	• Under this approach, banks use standardized capital charges prescribed by the regulator to calculate general and specific risk components of market risk.
Internal Models Approach (IMA)	• Under this approach, banks use their own internal risk management models to calculate specific risk and general market risk charges.
Credit Risk Terminology	
Gross credit risk exposure	• The total amount the Bank is exposed to at the time of default measured before counterparty-specific provisions or write-offs. Includes exposures under both the Standardized and AIRB approaches to credit risk.
Counterparty Type / Exposure Classes:	
Retail	
Residential Secured	• Includes residential mortgages and home equity lines of credit extended to individuals.
Qualifying Revolving Retail (QRR)	• Includes credit cards, unsecured lines of credit, and overdraft protection products extended to individuals (in the case of the Standardized approach to credit risk, credit card exposures are included in the "Other Retail" category).
Other Retail	• Includes all other loans (such as personal loans, student lines of credit, and small business loans) extended to individuals and small businesses.
Non-retail	
Corporate	• Includes exposures to corporations, partnerships, or proprietorships.
Sovereign	• Includes exposures to central governments, central banks, multilateral development banks, and certain public sector entities.
Bank	• Includes exposures to deposit-taking institutions, securities firms, and certain public sector entities.
Exposure Types:	
Drawn	• The amount of funds advanced to a borrower.
Undrawn (commitment)	• The difference between the authorized and drawn amounts (for instance, the unused portion of a line of credit/committed credit facility).
Repo-style transactions	• Repurchase and reverse repurchase agreements, securities borrowing and lending.
OTC derivatives	• Privately negotiated derivative contracts.
Other off-balance sheet	• All off-balance sheet arrangements other than derivatives and undrawn commitments (such as letters of credit, letters of guarantee).
AIRB Credit Risk Parameters:	
Probability of Default (PD)	• The likelihood that the borrower will not be able to meet its scheduled repayments within a one year time horizon.
Exposure at Default (EAD)	• The total amount the Bank is exposed to at the time of default.
Loss Given Default (LGD)	• The amount of the loss when a borrower defaults on a loan, which is expressed as a percentage of EAD.
Credit Valuation Adjustment (CVA)	• CVA represents a capital charge that measures credit risk due to default of derivative counterparties. This charge requires banks to capitalize for the potential changes in counterparty credit spread for the derivative portfolios. As per OSFI's final Capital Adequacy Requirements (CAR) guideline, the CVA capital charge was implemented for 2014, and in 2019 has been fully phased-in.
Common Equity Tier 1 (CET1)	• This is a primary Basel III capital measure comprised mainly of common equity, retained earnings and accumulated other comprehensive income (loss). Regulatory deductions made to arrive at the CET1 Capital include, goodwill and intangibles, unconsolidated investments in banking, financial, and insurance entities, deferred tax assets, defined benefit pension fund assets, and shortfalls in allowances.
CET1 Ratio	• CET1 ratio represents the predominant measure of capital adequacy under Basel III and equals CET1 Capital divided by CET1 Capital RWA.
Return on Common Equity Tier 1 (CET1) Capital risk-weighted assets	• Net income available to common shareholders as a percentage of average CET1 Capital RWA.
Liquidity Coverage Ratio (LCR)	• LCR is calculated by dividing the total stock of unencumbered high-quality liquid assets by the expected next 30-day stressed cash outflow.
Countercyclical Capital Buffer (CCB)	• CCB is an extension of the capital conservation buffer which takes into account the macro-financial environment in which the banks operate and aims to protect the banking sector against future potential losses during periods of excess aggregate credit growth from a build-up of system-wide risk. The Bank's CCB will be a weighted average of the buffers deployed across jurisdictions to which the institution has private sector credit exposures.

Acronyms

Acronym	Definition	Acronym	Definition
AOCI	Accumulated Other Comprehensive Income	**IRB**	Internal Ratings-Based
BCBS	Basel Committee on Banking Supervision	**N/A**	Not Applicable
BRR	Borrower Risk Rating	**N/M**	Not Meaningful
CCF	Credit Conversion Factor	**NVCC**	Non-Viability Contingent Capital
CCP	Central Counterparty	**OSFI**	Office of the Superintendent of Financial Institutions Canada
CCR	Counterparty Credit Risk	**OTC**	Over-The-Counter
CMHC	Canada Mortgage and Housing Corporation	**PFE**	Potential Future Exposure
CRM	Credit Risk Mitigation	**QCCP**	Qualifying Central Counterparty
CSA	Credit Support Annex	**SA-CCR**	Standardized Approach Counterparty Credit Risk
D-SIBs	Domestic Systemically Important Banks	**SEC-ERBA**	Securitization External Ratings-Based Approach
FSB	Financial Stability Board	**SEC-IRBA**	Securitization Internal Ratings-Based Approach
G-SIBs	Global Systemically Important Banks	**SEC-SA**	Securitization Standardized Approach
HELOCs	Home Equity Lines of Credit	**SFTs**	Securities Financing Transactions
IAA	Internal Assessment Approach	**TLAC**	Total Loss Absorbing Capacity
IFRS	International Financial Reporting Standards	**VaR**	Value-at-Risk
IMM	Internal Model Method		