

# Supplementary Regulatory Capital Information

For the Quarter Ended – April 30, 2019

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*This report is unaudited and all amounts are in millions of Canadian dollars, unless otherwise indicated.*

**Use of this Document**

The supplemental information contained in this package is designed to improve the readers' understanding of the capital requirements of BMO Financial Group (the Bank). This information should be used in conjunction with the Bank's Second Quarter 2019 Report to Shareholders and the 2018 Annual Report.

Additional financial information is also available in the Q2 2019 Supplementary Financial Information, Q2 2019 Investor Presentation as well as the Conference Call Webcast which can be accessed at our website at [www.bmo.com/investorrelations](http://www.bmo.com/investorrelations).

This report is unaudited and all amounts are in millions of Canadian dollars, unless indicated otherwise.

Items indicated n.a. were not applicable.

**Changes**

For institutions using advanced approaches for credit risk or operational risk, there is a Capital Floor as prescribed in OSFI's CAR Guideline. OSFI revised its approach for calculating the Capital Floor effective Q2 2018. Changes include a shift to the Basel II standardized approach, as well as a reduction of the floor factor to 70% in Q2 2018, 72.5% in Q3 2018 and 75% in Q4 2018 and onward.

In May 2018, OSFI released the Total Loss Absorbing Capacity (TLAC) Disclosure Requirements for Canadian D-SIBs which have been adopted prospectively effective January 31, 2019.

On November 20, 2018, OSFI released the revised Leverage Ratio Disclosure Requirements Guideline. The revisions, which reflect the recent changes to the Leverage Requirements Guideline and OSFI's CAR Guideline, incorporate a new line to capture the treatment of securitized assets that meet the operational requirements for recognition of significant risk transfer. The new guideline has been adopted prospectively effective January 31, 2019.

On April 20, 2017, OSFI released the final version of the Pillar 3 Disclosure Requirements, setting OSFI's expectations for Domestic Systemically Important Banks (D-SIBs) for the Revised Pillar 3 Disclosure Requirements issued by the Basel Committee on Banking Supervision in January 2015. We have adopted this guidance prospectively effective October 31, 2018. For information prior to Q4 2018, please refer to Q3 2018 and prior Supplementary Financial Information Packages.

*Users may provide their comments and suggestions on the Supplementary Regulatory Capital Information document by contacting Christine Viau at (416) 867-6956 or [christine.viau@bmo.com](mailto:christine.viau@bmo.com)*

**PILLAR 3 DISCLOSURE REQUIREMENTS INDEX**

Tables and Templates		Frequency	Q2 2019 Supplementary Financial Information	Q2 2019 Supplementary Regulatory Capital Information	2018 Annual MD&A	2018 Annual Financial Statements
			Page Reference			
Overview of risk management, key prudential metrics and RWA	KM2 - Key metrics - TLAC requirements	Quarterly		7		
	OVA - Bank risk management approach	Annual			69-75, 78-116	
	OV1 - Overview of RWA	Quarterly		11		
Linkages between financial statements and regulatory exposures	LI1 - Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories	Quarterly		12		
	LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements	Quarterly		13		
	LIA - Explanations of differences between accounting and regulatory exposure amounts	Annual		12-13	118	184-190
Composition of Capital and TLAC	CC1 - Composition of regulatory capital	Quarterly		3-4		
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	TLAC1 - TLAC composition	Quarterly		8		
	TLAC2 - Material subgroup entity - creditor ranking at legal entity level			Not applicable to BMO		
Leverage ratio	TLAC3 - Resolution entity - creditor ranking at legal entity level	Quarterly		9		
	LR1 - Summary comparison of accounting assets vs leverage ratio exposure measure	Quarterly		10		
	LR2 - Leverage ratio common disclosure	Quarterly		10		
Credit risk	CRA - General qualitative information about credit risk	Annual			81-87	
	CR1 - Credit quality of assets	Quarterly		14		
	CR2 - Changes in stock of defaulted loans and debt securities	Quarterly		15		
	CRB - Additional disclosure related to the credit quality of assets	Annual	20-26, 30	27-28		157-164
	CRC - Qualitative disclosure requirements related to credit risk mitigation techniques	Annual			88-89	173, 185
	CR3 - Credit risk mitigation techniques - overview	Quarterly		16		
	CRD - Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	Annual		18		
	CR4 - Standardized approach - credit risk exposure and Credit Risk Mitigation (CRM) effects	Quarterly		17		
	CR5 - Standardized approach - exposures by asset classes and risk weights	Quarterly		18		
	CRE - Qualitative disclosures related to IRB models	Annual			89-90, 111-112	
	CR6 - IRB - Credit risk exposures by portfolio and PD range	Quarterly		19-24		
CR7 - IRB - Effect on RWA of credit derivatives used as CRM techniques	Quarterly		25			
CR8 - RWA flow statements of credit risk exposures under IRB	Quarterly		26			
CR9 - IRB - Backtesting of probability of default (PD) per portfolio (1)	Annual				88-90, 112	
CR10 - IRB (specialized lending and equities under the simple risk-weight method)			Not applicable to BMO			
Counterparty credit risk	CCRA - Qualitative disclosure related to counterparty credit risk	Annual			87-88, 106	
	CCR1 - Analysis of counterparty credit risk (CCR) exposure by approach	Quarterly		29		
	CCR2 - Credit valuation adjustment (CVA) capital charge	Quarterly		30		
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	CCR7 - RWA flow statements of CCR exposures under Internal Model Method (IMM)			Not applicable to BMO		
CCR8 - Exposures to central counterparties	Quarterly		37			
Securitization	SECA - Qualitative disclosure requirements related to securitization exposures	Annual			76, 89	148, 165-167
	SEC1 - Securitization exposures in the banking book	Quarterly		39		
	SEC2 - Securitization exposures in the trading book	Quarterly		40		
	SEC3 - Securitization exposures in the banking book and associated regulatory capital requirements (bank acting as originator or as sponsor)	Quarterly		41		
SEC4 - Securitization exposures in the banking book and associated capital requirements (bank acting as investor)	Quarterly		42			
Market risk	MRA - Qualitative disclosure requirements related to market risk			BMO has deferred these disclosures as allowed per OSFI's Pillar 3 guidance 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 estimates with gains/losses						
Operational Risk	ORA - General qualitative information on a bank's operational risk framework	Annual			109-110	
Interest Rate Risk in the Banking Book	IRRBBA - IRRBB risk management objective and policies	Annual			98-99	
	IRRBB1 - Quantitative information on IRRBB	Annual			99	

(1) Refer to Q4 2018 Supplementary Financial Information for CR9 - IRB - Backtesting of probability of default (PD) per portfolio quantitative disclosure.

CC1 - COMPOSITION OF REGULATORY CAPITAL (1) (2)

	Gross reference (3)	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2
(\$ millions except as noted)						
<b>Common Equity Tier 1 Capital: instruments and reserves</b>						
1	Directly issued qualifying common share capital plus related stock surplus	a+b	13,246	13,222	13,229	13,226
2	Retained earnings	c	27,405	26,599	25,856	24,909
3	Accumulated other comprehensive income (and other reserves)	d	4,054	3,188	2,302	2,381
4	Directly issued capital subject to phase out from CET1		n.a.	n.a.	n.a.	n.a.
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)		-	-	-	-
6	<b>Common Equity Tier 1 Capital before regulatory adjustments</b>		44,705	43,009	41,387	40,516
<b>Common Equity Tier 1 Capital: regulatory adjustments</b>						
7	Prudential valuation adjustments		163	156	203	149
8	Goodwill (net of related tax liability)	e+p1-f	6,353	6,280	6,283	6,186
9	Other intangibles other than mortgage-servicing rights (net of related tax liability)	g-h	2,044	1,989	1,978	1,920
10	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	i-j	646	785	907	972
11	Cash flow hedge reserve	k	202	(280)	(1,074)	(885)
12	Shortfall of provisions to expected losses	k1	267	-	-	-
13	Securitization gain on sale		-	-	-	-
14	Gains or losses due to changes in own credit risk on fair valued liabilities (4)		(182)	(71)	(153)	(168)
15	Defined benefit pension fund net assets (net of related tax liability)	l-m	430	424	522	626
16	Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	n	6	-	-	-
17	Reciprocal cross holdings in common equity		-	-	-	-
18	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)		-	-	-	-
19	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)		-	-	-	-
20	Mortgage servicing rights (amount above 10% threshold)		-	-	-	-
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)		-	-	-	-
22	Amount exceeding the 15% threshold		-	-	-	-
23	of which: significant investments in the common stock financials	h1	-	-	-	-
24	of which: mortgage servicing rights	j1	-	-	-	-
25	of which: deferred tax assets arising from temporary differences	i1	-	-	-	-
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI		-	-	-	-
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		-	-	-	-
28	<b>Total regulatory adjustments to Common Equity Tier 1 Capital</b>		9,929	9,283	8,666	8,828
29	<b>Common Equity Tier 1 Capital (CET1)</b>		34,776	33,726	32,721	31,688
<b>Additional Tier 1 Capital: instruments</b>						
30	Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	o1	4,400	4,050	4,050	3,650
31	of which: classified as equity under applicable accounting standards		4,400	4,050	4,050	3,650
32	of which: classified as liabilities under applicable accounting standards		-	-	-	-
33	Directly issued capital instruments subject to phase out from Additional Tier 1 (5)	p	290	290	740	740
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group AT1)		-	-	-	-
35	of which: instruments issued by subsidiaries subject to phase out		-	-	-	-
36	<b>Additional Tier 1 Capital before regulatory adjustments</b>		4,690	4,340	4,790	4,390
<b>Additional Tier 1 Capital: regulatory adjustments</b>						
37	Investments in own Additional Tier 1 instruments	n1	6	6	78	140
38	Reciprocal cross holdings in Additional Tier 1 instruments		-	-	-	-
39	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)		-	-	-	-
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	t	213	213	213	213
41	Other deductions from Tier 1 Capital as determined by OSFI		-	-	-	-
41a	of which: Reverse mortgages		-	-	-	-
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions		-	-	-	-
43	<b>Total regulatory adjustments applied to Additional Tier 1 Capital</b>		219	219	291	353
44	<b>Additional Tier 1 Capital (AT1)</b>		4,471	4,121	4,499	4,037
45	<b>Tier 1 Capital (T1 = CET1 + AT1)</b>		39,247	37,847	37,220	35,725
<b>Tier 2 Capital: instruments and provisions</b>						
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	m1	6,809	6,676	6,639	5,468
47	Directly issued capital instruments subject to phase out from Tier 2 Capital	u	144	144	143	150
48	Tier 2 instruments (and CET1 and AT1 instruments not included in row 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2 Capital)	v	-	-	-	-
49	of which: instruments issued by subsidiaries subject to phase out		-	-	-	-
50	General allowances	w	187	248	235	231
51	<b>Tier 2 Capital before regulatory adjustments</b>		7,140	7,068	7,017	5,849

(1) "All-in" regulatory capital assumes that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022.

(2) Row numbering, as per OSFI May 2018 advisory, is provided for consistency and comparability in the disclosure of elements of capital among banks and across jurisdictions. Banks are required to maintain the same row numbering per OSFI advisory. Where there is no value in a row, institutions should report n.a. or nil and the row number must not change.

(3) Cross reference to CC2 - Reconciliation of Regulatory Capital to Balance Sheet (page 5).

(4) For regulatory capital purposes only. Not included in consolidated balance sheet.

(5) \$450MM of capital trust securities that were deconsolidated under IFRS and qualified as Additional Tier 1 Capital were redeemed on December 31, 2018.

**CC1 - COMPOSITION OF REGULATORY CAPITAL (CONTINUED)**

	Cross reference	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2
(\$ millions except as noted)						
<b>Tier 2 Capital: regulatory adjustments</b>						
52 Investments in own Tier 2 instruments	q1	29	76	71	91	72
53 Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments		-	-	-	-	-
54 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)		-	-	-	-	-
54a 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		-	-	-	-	-
55 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, net of eligible short positions	x	50	50	50	50	50
56 Other deductions from Tier 2 capital		-	-	-	-	-
<b>57 Total regulatory adjustments to Tier 2 Capital</b>		<b>79</b>	<b>126</b>	<b>121</b>	<b>141</b>	<b>122</b>
<b>58 Tier 2 Capital (T2)</b>		<b>7,061</b>	<b>6,942</b>	<b>6,896</b>	<b>5,708</b>	<b>5,727</b>
<b>59 Total Capital (TC = T1 + T2)</b>		<b>46,308</b>	<b>44,789</b>	<b>44,116</b>	<b>41,433</b>	<b>40,941</b>
<b>60 Total Risk-Weighted Assets</b>						
<b>60a Common Equity Tier 1 (CET 1) Capital RWA (1)</b>		<b>308,844</b>	<b>296,987</b>	<b>289,237</b>	<b>277,506</b>	<b>273,011</b>
<b>60b Tier 1 Capital RWA (1)</b>		<b>308,844</b>	<b>296,987</b>	<b>289,420</b>	<b>277,681</b>	<b>273,184</b>
<b>60c Total Capital RWA (1)</b>		<b>308,844</b>	<b>296,987</b>	<b>289,604</b>	<b>277,857</b>	<b>273,357</b>
<b>Capital Ratios</b>						
61 Common Equity Tier 1 (as percentage of risk-weighted assets)		11.3%	11.4%	11.3%	11.4%	11.3%
62 Tier 1 (as percentage of risk-weighted assets)		12.7%	12.7%	12.9%	12.9%	12.9%
63 Total Capital (as percentage of risk-weighted assets)		15.0%	15.1%	15.2%	14.9%	15.0%
64 Buffer (minimum CET1 plus capital conservation buffer plus G-SIB buffer plus D-SIB buffer requirement, expressed as a percentage of risk-weighted assets)		8.0%	8.0%	8.0%	8.0%	8.0%
65 of which: capital conservation buffer		2.5%	2.5%	2.5%	2.5%	2.5%
66 of which: bank specific countercyclical buffer		0.0%	0.0%	0.0%	0.0%	0.0%
67 of which: G-SIB buffer		n.a.	n.a.	n.a.	n.a.	n.a.
67a of which: D-SIB buffer		1.0%	1.0%	1.0%	1.0%	1.0%
68 Common Equity Tier 1 available to meet buffers (as a percentage of risk weighted assets)		11.3%	11.4%	11.3%	11.4%	11.3%
<b>OSFI target (minimum + capital conservation buffer + D-SIB buffer (if applicable))</b>						
69 Common Equity Tier 1 target ratio		8.0%	8.0%	8.0%	8.0%	8.0%
70 Tier 1 capital target ratio		9.5%	9.5%	9.5%	9.5%	9.5%
71 Total capital target ratio		11.5%	11.5%	11.5%	11.5%	11.5%
<b>Amounts below the thresholds for deduction (before risk weighting)</b>						
72 Non-significant investments in the capital and Other TLAC-eligible instruments of other financial entities	y - z	702	759	642	534	575
73 Significant investments in the common stock of financials	a1	1,863	1,739	1,660	1,694	1,635
74 Mortgage servicing rights (net of related tax liability)	b1	49	50	52	51	49
75 Deferred tax assets arising from temporary differences (net of related tax liability)	c1 - d1	1,651	1,558	1,677	1,675	1,597
<b>Applicable caps on the inclusion of provisions in Tier 2</b>						
76 Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)		187	213	208	204	204
77 Cap on inclusion of provisions in Tier 2 under standardized approach		187	213	208	204	204
78 Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings based approach (prior to application of cap)		1,119	1,286	1,277	1,270	1,255
79 Cap on inclusion of provisions in Tier 2 under internal ratings-based approach		-	35	27	27	18
<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)</b>						
80 Current cap on CET1 instruments subject to phase out arrangements		-	-	-	-	-
81 Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)		-	-	-	-	-
82 Current cap on AT1 instruments subject to phase out arrangements		1,296	1,296	1,729	1,729	1,729
83 Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)		-	-	-	-	-
84 Current cap on T2 instruments subject to phase out arrangements		1,540	1,540	2,054	2,054	2,054
85 Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)		-	-	-	-	-

(1) Under OSFI's CAR Guideline, which governs advanced approaches, the Bank calculates a Basel Capital Floor and increases its risk-weighted assets to the extent such floor applies. Based on these requirements, there was no capital floor applicable for Q2 2018 through Q2 2019.

CC2 - RECONCILIATION OF REGULATORY CAPITAL TO BALANCE SHEET

(\$ millions)	LINE #	Balance sheet as in	Under regulatory	Cross	LINE #	Balance sheet as in	Under regulatory	Cross
		Report to Shareholders	scope of consolidation (1)	Reference (2)		Report to Shareholders	scope of consolidation (1)	Reference (2)
		Q2 2019	Q2 2019			Q2 2019	Q2 2019	
<b>Assets</b>								
Cash and Cash Equivalents	1	35,839	35,790					
Interest Bearing Deposits with Banks	2	7,518	7,506					
Securities	3	191,226	181,819					
Investments in own shares CET1 (if not already netted off paid-in capital on reported balance sheet)	4		6	n				
Investments in own Additional Tier 1 instruments not derecognized for accounting purposes	5		6	n1				
Investments in own Tier 2 instruments not derecognized for accounting purposes	6		29	q1				
Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities (3)	7		22,918	y				
Significant investments in deconsolidated subsidiaries and other financial institutions (4)	8		2,126	t+x+a1				
Significant investments in capital of other financial institutions reflected in regulatory capital								
Amount exceeding the 15% threshold	9		-	h1				
Significant investment in common stock of financials below threshold	10		518					
Goodwill embedded in significant investments	11		58	p1				
<b>Securities Borrowed or Purchased Under Resale Agreements</b>	12	110,405	110,405					
<b>Loans</b>								
Residential mortgages	13	120,778	120,778					
Consumer installment and other personal	14	64,454	64,454					
Credit cards	15	8,467	8,467					
Business and governments	16	221,253	221,040					
Allowance for credit losses	17	(1,710)	(1,710)					
Allowance reflected in Tier 2 regulatory capital	18		187	w				
Shortfall of provisions to expected loss	19		267	k1				
<b>Total net loans and acceptances</b>	20	413,242	413,029					
<b>Other Assets</b>								
Derivative instruments	21	20,627	20,625					
Customers' liability under acceptances	22	21,702	21,702					
Premises and equipment	23	1,983	1,842					
Goodwill	24	6,500	6,500	e				
Intangible assets	25	2,331	2,331	g				
Current tax assets	26	1,309	1,266					
Deferred tax assets (5)	27	1,765	1,765					
Deferred tax assets excluding those arising from temporary differences	28		706	i				
Deferred tax assets arising from temporary differences	29		1,806	c1				
of which Deferred tax assets arising from temporary differences below the threshold	30		1,806					
of which amount exceeding 15% threshold	31		-	i1				
Other	32	16,023	14,893					
Defined-benefit pension fund net assets	33		543	l				
Mortgage servicing rights	34		49					
of which Mortgage servicing rights under the threshold	35		49	b1				
of which amount exceeding the 15% threshold	36		-	j1				
<b>Total Assets</b>	37	830,470	819,473					
(1) Balance sheet under regulatory scope does not include the following entities: BMO Life Insurance Company and BMO Reinsurance Limited. BMO Life Insurance Company (\$10,573 million assets and nominal equity) covers the development and marketing of individual and group life, accident and health insurance and annuity products in Canada. BMO Reinsurance Limited (\$424 million assets and nominal equity) covers the reinsurance of life, health and disability insurance risks as well as property & casualty insurance risks, including catastrophe risks. The business reinsured is written by insurers and reinsurers principally in North America and Europe.								
(2) Cross reference to CC1 - Composition of Regulatory Capital (pages 3 and 4).								
(3) Includes synthetic holdings of non-significant capital investments in banking, financial and insurance entities.								
(4) Under Basel III, significant investments in financial services entities that are outside the scope of regulatory consolidation are deducted from the Bank's capital using the corresponding deduction approach (e.g. investments in non-common Tier 1 are deducted from the Bank's non-common Tier 1 capital) except that investments in common equity capital of a significant investment which represents less than 10% of the Bank's CET1 are risk weighted at 250% and are not deducted provided the sum of such investments, deferred tax assets related to timing differences and mortgage servicing rights are less than 15% of the Bank's CET1. Goodwill embedded in significant investments is separated and is shown in the corresponding line below.								
(5) Deferred tax assets and liabilities are presented on the balance sheet net by legal jurisdiction.								
<b>Liabilities and Equity</b>								
<b>Total Deposits</b>	38	548,837	548,837					
<b>Other Liabilities</b>								
Derivative instruments	39	21,549	21,337					
Acceptances	40	21,702	21,702					
Securities sold but not yet purchased	41	32,023	32,023					
Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities	42		22,216	z				
Securities lent or sold under repurchase agreement	43	87,039	87,039					
Securitization and structured entities' liabilities	44	25,621	25,621					
Current tax liabilities	45	42	42					
Deferred tax liabilities (5)	46	73	70					
related to goodwill	47		205	f				
related to intangibles	48		287	h				
related to deferred tax assets excluding those arising from temporary differences	49		60	j				
related to defined-benefit pension fund net assets	50		113	m				
related to deferred tax assets arising from temporary differences, excluding those realizable through net operating loss carryback	51		155	d1				
Other	52	37,236	26,454					
of which: liabilities of subsidiaries, other than deposits	53		-					
Less: amount (of liabilities of subsidiaries) phased out	54		-					
Liabilities of subsidiaries after phase out	55		-	v				
<b>Total other liabilities</b>	56	225,285	214,288					
<b>Subordinated Debt</b>								
Subordinated debt	57	6,953	6,953					
Qualifying subordinated debt	58		6,809	m1				
Non qualifying subordinated debt	59		144					
of which redemption has been announced (in the last month of the quarter)	60		-					
Less: regulatory amortization	61		-					
Non qualifying subordinated debt subject to phase out	62		144					
Less: amount phased out	63		-					
Non qualifying subordinated debt after phase out	64		144	u				
<b>Equity</b>								
Preferred shares	65	4,690	4,690					
Directly issued qualifying Additional Tier 1 instruments	66		4,400	o1				
Non-qualifying preferred shares for accounting purposes	67		-					
Non-qualifying preferred shares subject to phase out	68		290					
Less amount (of preferred shares) phased out	69		-					
Non qualifying preferred shares after phase out	70		290	p				
Common shares	71	12,939	12,939					
Directly issued qualifying CET1	72		12,939	a				
Contributed surplus	73	307	307	b				
Retained earnings	74	27,405	27,405	c				
Accumulated other comprehensive income	75	4,054	4,054	d				
of which: Cash flow hedges	76		202	k				
Other AOCI	77		3,852					
<b>Total shareholders' equity</b>	78	49,395	49,395					
<b>Total Liabilities and Equity</b>	79	830,470	819,473					

**FLOW STATEMENT OF BASEL III REGULATORY CAPITAL**

	LINE	2019	2019	2018	2018	2018
(\$ millions)	#	Q2	Q1	Q4	Q3	Q2
<b>Common Equity Tier 1 Capital</b>						
<b>Opening Balance</b>	1	33,726	32,721	31,688	30,793	30,165
New capital issues	2	25	5	26	18	7
Redeemed capital	3	-	(90)	(107)	(102)	(488)
Gross dividends (deduction)	4	(687)	(691)	(657)	(664)	(642)
Profit for the quarter (attributable to shareholders of the parent company)	5	1,497	1,510	1,695	1,536	1,246
Removal of own credit spread (net of tax)	6	110	(82)	13	(28)	(48)
Movements in other comprehensive income						
– Currency translation differences	7	453	(12)	241	102	878
– Fair value through other comprehensive income securities	8	31	173	(71)	9	(128)
– Other (1)	9	(100)	(69)	(60)	230	69
Goodwill and other intangible assets (deduction, net of related tax liability)	10	(128)	(8)	(155)	(37)	(262)
Other, including regulatory adjustments and transitional arrangements						
– Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)	11	139	122	(65)	4	35
– Prudential valuation adjustments	12	(7)	47	(55)	(3)	(34)
– Other (2) (3)	13	(283)	100	228	(170)	(5)
<b>Closing Balance</b>	14	34,776	33,726	32,721	31,688	30,793
<b>Other non-core Tier 1 (Additional Tier 1) Capital</b>						
<b>Opening Balance</b>	15	4,121	4,499	4,037	4,421	4,438
New non-core tier 1 (Additional Tier 1) eligible capital issues	16	350	-	400	-	-
Redeemed capital	17	-	(450)	-	(300)	-
Other, including regulatory adjustments and transitional arrangements (4)	18	-	72	62	(84)	(17)
<b>Closing Balance</b>	19	4,471	4,121	4,499	4,037	4,421
<b>Total Tier 1 Capital</b>	20	39,247	37,847	37,220	35,725	35,214
<b>Tier 2 Capital</b>						
<b>Opening Balance</b>	21	6,942	6,896	5,708	5,727	6,607
New Tier 2 eligible capital issues	22	-	-	1,119	-	-
Redeemed capital	23	-	-	-	-	(900)
Amortization adjustments	24	-	-	-	-	-
Other, including regulatory adjustments and transitional arrangements (5)	25	119	46	69	(19)	20
<b>Closing Balance</b>	26	7,061	6,942	6,896	5,708	5,727
<b>Total Regulatory Capital</b>	27	46,308	44,789	44,116	41,433	40,941

(1) Includes: AOCI on pension and other post-employment benefits and on own credit risk financial liabilities designated at fair value.

(2) Includes: Capital deductions for expected loss in excess of allowances, defined benefit pension assets (net of related deferred tax liability), investment in own shares, changes in contributed surplus and threshold deductions.

(3) Includes: Impact to net income resulting from IFRS 15 retrospective adoption.

(4) Includes: Changes in non-qualifying capital instruments.

(5) Includes: Changes in non-qualifying capital instruments and eligible allowances.

**CAPITAL RATIOS FOR SIGNIFICANT BANK SUBSIDIARIES**

		2019	2019	2018	2018	2018
		Q2	Q1	Q4	Q3	Q2
<b>Bank of Montreal Mortgage Corporation - All-in Basis - Basel III (1)</b>						
Common Equity Tier 1 ratio	28	23.6%	22.0%	21.6%	21.8%	23.5%
Tier 1 ratio	29	23.6%	22.0%	21.6%	21.8%	23.5%
Total capital ratio	30	24.0%	22.4%	22.1%	22.3%	24.1%
<b>BMO Harris Bank N.A. - Basel III (2)</b>						
Tier 1 ratio	31	11.7%	12.0%	12.5%	12.5%	12.8%
Total capital ratio	32	12.9%	13.1%	13.7%	13.7%	14.0%

(1) All-in capital ratios assume that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013, continuing to January 1, 2022.

(2) Calculated using U.S. Basel III guidelines currently in effect for U.S. regulatory purposes and based on BMO Harris N.A.'s calendar quarter ends: March 2019, December 2018, September 2018, June 2018, and March 2018.



**KM2 - KEY METRICS – TLAC REQUIREMENTS (1)**

(\$ millions except as noted)

		Q2 2019	Q1 2019
		a	b
1	Total loss-absorbing capacity (TLAC) available	55,389	45,491
2	Total RWA at the level of the resolution group	308,844	296,987
3	TLAC ratio: TLAC as a percentage of RWA (row 1 / row 2) (%)	17.9 %	15.3 %
4	Leverage ratio exposure measure at the level of the resolution group	931,500	902,532
5	TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure (row 1 / row 4) (%)	5.9 %	5.0 %
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	Yes	Yes
6b	Does the subordination exemption in the penultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	No	No
6c	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 (%)	n.a.	n.a.

(1) BMO Financial Group uses the Single Point of Entry approach whereby the parent bank is the single resolution entity on which the resolution measures are applied. KM2 is reported on a consolidated basis excluding insurance subsidiaries.

**TLAC1 - TLAC COMPOSITION (1)**

(\$ millions except as noted)

		Q2 2019	Q1 2019
		a	b
<b>Regulatory capital elements of TLAC and adjustments</b>			
1	Common Equity Tier 1 capital (CET1)	34,776	33,726
2	Additional Tier 1 capital (AT1) before TLAC adjustments	4,471	4,121
3	AT1 ineligible as TLAC as issued out of subsidiaries to third parties	-	-
4	Other adjustments	-	-
5	AT1 instruments eligible under the TLAC framework	4,471	4,121
6	Tier 2 capital (T2) before TLAC adjustments	7,061	6,942
7	Amortized portion of T2 instruments where remaining maturity > 1 year	-	-
8	T2 capital ineligible as TLAC as issued out of subsidiaries to third parties	-	-
9	Other adjustments	-	-
10	T2 instruments eligible under the TLAC framework	7,061	6,942
11	TLAC arising from regulatory capital	46,308	44,789
<b>Non-regulatory capital elements of TLAC</b>			
12	External TLAC instruments issued directly by the Bank and subordinated to excluded liabilities	-	-
13	External TLAC instruments issued directly by the Bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements	9,164	706
14	Of which: amount eligible as TLAC after application of the caps	-	-
15	External TLAC instruments issued by funding vehicles prior to January 1, 2022	-	-
16	Eligible ex ante commitments to recapitalize a G-SIB in resolution	-	-
17	TLAC arising from non-regulatory capital instruments before adjustments	9,164	706
<b>Non-regulatory capital elements of TLAC: adjustments</b>			
18	TLAC before deductions	55,472	45,495
19	Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs and D-SIBs)	-	-
20	Deduction of investments in own other TLAC liabilities	(83)	(4)
21	Other adjustments to TLAC	-	-
22	TLAC available after deductions	55,389	45,491
<b>Risk-weighted assets and leverage exposure measure for TLAC purposes</b>			
23	Total risk-weighted assets adjusted as permitted under the TLAC regime	308,844	296,987
24	Leverage exposure measure	931,500	902,532
<b>TLAC ratios and buffers</b>			
25	TLAC Ratio (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	17.9 %	15.3 %
26	TLAC Leverage Ratio (as a percentage of leverage exposure)	5.9 %	5.0 %
27	CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements (2)	n.a.	n.a.
28	Institution-specific buffer (capital conservation buffer plus countercyclical buffer plus higher loss absorbency, expressed as a percentage of risk-weighted assets)	3.5 %	3.5 %
29	Of which: capital conservation buffer	2.5 %	2.5 %
30	Of which: bank specific countercyclical buffer	0.0 %	0.0 %
31	Of which: D-SIB / G-SIB buffer	1.0 %	1.0 %

(1) BMO Financial Group uses the Single Point of Entry approach whereby the parent bank is the single resolution entity on which the resolution measures are applied. TLAC1 is reported on a consolidated basis excluding insurance subsidiaries.

(2) Completion of this row is not required by OSFI at this time.

**TLAC3 - RESOLUTION ENTITY - CREDITOR RANKING AT  
LEGAL ENTITY LEVEL (1)**

(\$ millions)

		Q2 2019					
		Creditor ranking					
		1	2	3	4	5	Sum
		(most junior)				(most senior)	1 to 5
1	Description of creditor ranking	Common shares	Preferred shares	Subordinated debt	Bail-in debt (2)	Other liabilities (3)	
2	Total capital and liabilities net of credit risk mitigation	12,939	4,690	7,062	9,145	-	33,836
3	Subset of row 2 that are excluded liabilities	4	6	29	83	-	122
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	12,935	4,684	7,033	9,062	-	33,714
5	Subset of row 4 that are potentially eligible as TLAC	12,935	4,684	7,033	9,062	-	33,714
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	1,147	-	1,147
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	7,645	-	7,645
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	5,270	44	-	5,314
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	1,763	226	-	1,989
10	Subset of row 5 that is perpetual securities	12,935	4,684	-	-	-	17,619

(1) Instruments are reported at nominal values.

(2) 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.

(3) Completion of this column is not required by OSFI at this time.

**LR1 - SUMMARY COMPARISON OF ACCOUNTING ASSETS VS. LEVERAGE RATIO EXPOSURE MEASURE (1)**

(\$ millions)	2019	2019	2018	2018	2018
	Q2	Q1	Q4	Q3	Q2
1 Total consolidated assets as per published financial statements	830,470	806,597	774,048	765,318	743,569
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(10,966)	(10,552)	(9,757)	(9,480)	(9,175)
3 Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference (2)	(8,159)	(6,543)	-	-	-
4 Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	-	-	-	-	-
5 Adjustments for derivative financial instruments	11,836	9,880	3,761	1,506	1,775
6 Adjustment for securities financing transactions (i.e. repo assets and similar secured lending)	2,137	1,058	8,347	3,069	2,930
7 Adjustment for off-balance sheet items (i.e. credit equivalent amounts of off-balance sheet exposures)	116,512	111,665	108,817	102,792	101,147
8 Other adjustments	(10,330)	(9,573)	(9,110)	(9,320)	(9,152)
<b>9 Leverage Ratio Exposure Measure</b>	<b>931,500</b>	<b>902,532</b>	<b>876,106</b>	<b>853,885</b>	<b>831,094</b>

**LR2 - LEVERAGE RATIO COMMON DISCLOSURE (1)**

(\$ millions except as noted)	Leverage ratio framework				
	2019	2019	2018	2018	2018
	Q2	Q1	Q4	Q3	Q2
<b>On-balance sheet exposures</b>					
1 On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	680,314	667,174	653,039	629,354	613,128
2 Gross up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	-	-	-	-	-
3 (Deductions of receivables assets for cash variation margin provided in derivative transactions)	(4,152)	(3,042)	(2,624)	(3,050)	(2,436)
4 (Asset amounts deducted in determining transitional Tier 1 capital)	(10,330)	(9,573)	(9,110)	(9,320)	(9,152)
<b>5 Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of lines 1 to 4)</b>	<b>665,832</b>	<b>654,559</b>	<b>641,305</b>	<b>616,984</b>	<b>601,540</b>
<b>Derivative exposures</b>					
6 Replacement cost associated with all derivative transactions (3)	14,792	14,224	6,515	6,169	7,332
7 Add-on amounts for potential future exposure associated with all derivative transactions (4)	24,369	22,674	27,114	23,943	24,214
8 (Exempted central counterparty-leg of client cleared trade exposures)	(2,557)	(2,347)	(1,044)	(751)	(751)
9 Adjusted effective notional amount of written credit derivatives	5,038	1,921	1,200	142	123
10 (Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(5,028)	(1,921)	(1,200)	(142)	(123)
<b>11 Total derivative exposures (sum of lines 6 to 10)</b>	<b>36,614</b>	<b>34,551</b>	<b>32,585</b>	<b>29,361</b>	<b>30,795</b>
<b>Securities financing transaction exposures</b>					
12 Gross SFT assets recognized for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	111,825	101,314	95,159	103,311	95,313
13 (Netted amounts of cash payables and cash receivables of gross SFT assets)	(5,661)	(5,107)	(7,675)	(3,591)	(3,636)
14 Counterparty credit risk (CCR) exposure for SFTs	6,378	5,550	5,914	5,028	5,935
15 Agent transaction exposures	-	-	-	-	-
<b>16 Total securities financing transaction exposures (sum of lines 12 to 15)</b>	<b>112,542</b>	<b>101,757</b>	<b>93,398</b>	<b>104,748</b>	<b>97,612</b>
<b>Other off-balance sheet exposures</b>					
17 Off-balance sheet exposure at gross notional amount	363,391	353,732	343,144	326,819	322,633
18 (Adjustments for conversion to credit equivalent amounts)	(246,879)	(242,067)	(234,326)	(224,027)	(221,486)
<b>19 Off-balance sheet items (sum of lines 17 and 18)</b>	<b>116,512</b>	<b>111,665</b>	<b>108,818</b>	<b>102,792</b>	<b>101,147</b>
<b>Capital and Total Exposures</b>					
20 Tier 1 capital	39,247	37,847	37,220	35,725	35,214
<b>21 Total Exposures (sum of lines 5, 11, 16 and 19)</b>	<b>931,500</b>	<b>902,532</b>	<b>876,106</b>	<b>853,885</b>	<b>831,094</b>
<b>Leverage Ratios</b>					
22 Basel III leverage ratio	4.2%	4.2%	4.2%	4.2%	4.2%

(1) Q2 2019 and Q1 2019 results are disclosed in accordance with OSFI's new Leverage Ratio Disclosure Requirements guideline.

(2) Represents the reduction of the leverage ratio exposure measure due to the exclusion of securitized exposures that meet the operational requirement for the recognition of risk transference.

(3) Effective Q1 2019, represents replacement cost after applying alpha equal to 1.4.

(4) Effective Q1 2019, represents potential future exposure after applying alpha equal to 1.4.

**OV1 - OVERVIEW OF RWA (1) (2)**

(\$ millions)		RWA (3)			Minimum capital requirements
		Q2 2019	Q1 2019	Q4 2018	Q2 2019
		a	b	c	d
1	<b>Credit risk (excluding counterparty credit risk (CCR))</b>	231,966	219,367	215,193	18,557
2	Of which standardized approach (SA)	42,281	40,403	39,288	3,382
3	Of which internal rating-based (IRB) approach	189,685	178,964	175,905	15,175
4	<b>Counterparty credit risk</b>	15,861	15,278	13,481	1,269
5	Of which standardized approach for counterparty credit risk (SA-CCR) (4)	6,827	6,227	4,746	546
6	Of which internal model method (IMM)	-	-	-	-
6a	Of which comprehensive approach for credit risk mitigation (for SFTs)	2,877	2,594	3,171	230
6b	Of which CVA capital charge	5,622	5,889	4,900	450
6c	Of which exposures to QCCP	535	568	664	43
7	<b>Equity positions in banking book under market-based approach</b>	-	-	-	-
8	<b>Equity investments in funds – look-through approach</b>	77	89	87	6
9	<b>Equity investments in funds – mandate-based approach</b>	909	831	731	73
10	<b>Equity investments in funds – fall-back approach</b>	139	161	118	11
11	<b>Settlement risk</b>	3	-	15	-
12	<b>Securitization exposures in banking book</b>	2,770	2,448	2,404	222
12a	Of which subject to the transitional arrangement (5)	(1,304)	(1,304)	-	(104)
13	Of which securitization internal ratings-based approach (SEC-IRBA) (6)	3,136	3,192	1,860	251
14	Of which securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA) (7)	221	226	544	18
15	Of which securitization standardized approach (SEC-SA)	717	334	-	57
16	<b>Market risk</b>	12,332	14,820	13,532	986
17	Of which standardized approach (SA) (8)	251	211	258	20
18	Of which internal model approaches (IMM)	12,081	14,609	13,274	966
19	<b>Operational risk</b>	35,877	35,624	35,205	2,870
20	Of which Basic Indicator Approach	51	50	49	4
21	Of which Standardized Approach	2,058	2,032	2,019	165
22	Of which Advanced Measurement Approach	33,768	33,542	33,137	2,701
23	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	8,910	8,369	8,471	713
24	<b>Floor adjustment (9)</b>	-	-	-	-
25	<b>Total</b>	308,844	296,987	289,237	24,707

- (1) RWA was \$308.8 billion at April 30, 2019, up from \$297.0 billion at January 31, 2019, and \$289.2 billion at October 31, 2018, driven by strong business growth and the impact of foreign exchange movements.
- (2) On October 30, 2018, OSFI released the final version of the CAR Guideline for implementation in Q1 2019. The main revisions relate to the domestic implementation of the standardized approach to counterparty credit risk (SA-CCR), capital requirements for bank exposures to central counterparties (CCPs) and the securitization framework. The Guideline has been implemented prospectively effective Q1 2019.
- (3) The scaling factor is applied to the risk-weighted asset amounts as applicable.
- (4) Q2 2019 and Q1 2019 reflect RWA calculated under SA-CCR while Q4 2018 reflects CEM.
- (5) OSFI has provided grandfathering of the revised securitization capital treatment for one year through a negative adjustment to risk-weighted assets that effectively eliminates the initial increase in risk weights.
- (6) Q4 2018 reflects SFA.
- (7) Q4 2018 reflects RBA.
- (8) Standardized approach market risk RWA reflects specific interest rate risk on securitization positions.
- (9) Under OSFI's CAR Guideline, which governs advanced approaches, the Bank calculates a Capital Floor and may be required to increase its risk-weighted assets if the Capital Floor applies. Based on these requirements, there was no capital floor applicable for Q2 2019, Q1 2019 and Q4 2018.

**COMMON EQUITY TIER 1 (CET 1) CAPITAL RISK-WEIGHTED ASSETS BY OPERATING GROUPS**

(\$ millions)	LINE #	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2
Personal and Commercial Banking	1	187,792	179,421	178,313	173,039	170,545
Wealth Management	2	20,381	19,239	19,069	18,560	17,538
BMO Capital Markets	3	89,790	87,246	80,606	74,663	73,875
Corporate Services, including Technology and Operations	4	10,881	11,081	11,249	11,244	11,053
<b>Total Common Equity Tier 1 Capital Risk-Weighted Assets</b>	5	308,844	296,987	289,237	277,506	273,011

**L11 - DIFFERENCES BETWEEN ACCOUNTING AND REGULATORY SCOPES OF CONSOLIDATION AND MAPPING OF FINANCIAL STATEMENTS WITH REGULATORY RISK CATEGORIES**

		Q2 2019						
		Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation (1)	Carrying values of items:				
LINE #	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	
(\$ millions)		a	b	c	d	e	f	g
<b>ASSETS</b>								
Cash and Cash Equivalents	1	35,839	35,790	32,392	3,398	-	-	-
Interest Bearing Deposits with Banks	2	7,518	7,506	7,506	-	-	-	-
Securities	3	191,226	181,819	79,370	-	1,142	101,050	257
Securities Borrowed or Purchased Under Resale Agreements	4	110,405	110,405	-	110,405	-	-	-
<b>Loans</b>								
Residential mortgages	6	120,778	120,778	119,770	-	974	-	34
Consumer instalment and other personal	7	64,454	64,454	60,638	-	83	-	3,733
Credit cards	8	8,467	8,467	1,697	-	2,153	-	4,617
Businesses and governments	9	221,253	221,040	210,743	2,550	7,747	-	-
Allowance for credit losses	10	(1,710)	(1,710)	(1,481)	-	(229)	-	-
<b>Other Assets</b>								
Derivative instruments	11	20,627	20,625	-	20,625	-	18,552	-
Customers' liability under acceptances	12	21,702	21,702	21,702	-	-	-	-
Premises and equipment	13	1,983	1,842	1,842	-	-	-	-
Goodwill	14	6,500	6,500	-	-	-	-	6,500
Intangible assets	15	2,331	2,331	-	-	-	-	2,331
Current tax assets	16	1,309	1,266	1,266	-	-	-	-
Deferred tax assets	17	1,765	1,765	1,651	-	-	-	114
Other	18	16,023	14,893	14,097	-	-	253	543
<b>Total assets</b>	<b>19</b>	<b>830,470</b>	<b>819,473</b>	<b>551,193</b>	<b>136,978</b>	<b>11,870</b>	<b>119,855</b>	<b>18,129</b>
<b>LIABILITIES</b>								
Deposits	20	548,837	548,837	-	-	-	16,142	532,695
<b>Other Liabilities</b>								
Derivative instruments	21	21,549	21,337	-	21,337	-	19,148	-
Acceptances	22	21,702	21,702	-	-	-	-	21,702
Securities sold but not yet purchased	23	32,023	32,023	-	-	-	32,023	-
Securities lent or sold under repurchase agreements	24	87,039	87,039	-	87,039	-	-	-
Securitization and liabilities related to structured entities	25	25,621	25,621	-	-	-	-	25,621
Current tax liabilities	26	42	42	-	-	-	-	42
Deferred tax liabilities	27	73	70	-	-	-	-	70
Other	28	37,236	26,454	-	-	-	-	26,454
<b>Subordinated Debt</b>	<b>29</b>	<b>6,953</b>	<b>6,953</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,953</b>
<b>Total liabilities</b>	<b>30</b>	<b>781,075</b>	<b>770,078</b>	<b>-</b>	<b>108,376</b>	<b>-</b>	<b>67,313</b>	<b>613,537</b>

(1) Balance sheet under regulatory scope does not include the following entities: BMO Life Insurance Company and BMO Reinsurance Limited. BMO Life Insurance Company (\$10,573 million assets and nominal equity) covers the development and marketing of individual and group life, accident and health insurance and annuity products in Canada. BMO Reinsurance Limited (\$424 million assets and nominal equity) covers the reinsurance of life, health and disability insurance risks as well as property & casualty insurance risks, including catastrophe risks. The business reinsured is written by insurers and reinsurers principally in North America and Europe.

**L12 - MAIN SOURCES OF DIFFERENCES BETWEEN REGULATORY EXPOSURE AMOUNTS AND CARRYING VALUES IN FINANCIAL STATEMENTS**

(\$ millions)		Q2 2019				
		Total	Items subject to:			
			Credit risk framework	Counterparty credit risk framework	Securitization framework	Market risk framework
a	b	c	d	e		
1	Asset carrying value amount under scope of regulatory consolidation (as per template L11) (1)	801,344	551,193	136,978	11,870	119,855
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template L11) (1)	156,541	-	108,376	-	67,313
3	<b>Total net amount under regulatory scope of consolidation</b>	644,803	551,193	28,602	11,870	52,542
4	Off-balance sheet amounts	230,427	173,155	43,786	13,486	-
5	Differences due to different netting rules, other than those already included in row 2	20,557	-	20,557	-	-
6	Differences due to consideration of provisions	1,930	1,701	-	229	-
7	Exposures related to liability repo-style transactions	174,079	-	174,079	-	-
8	Potential future exposure on derivatives	16,758	-	16,758	-	-
9	Differences due to consideration of CRM	(223,662)	(62)	(222,955)	(645)	-
10	<b>Exposure amounts considered for regulatory purposes (2)</b>	864,892	725,987	60,827	24,940	52,542

(1) Carrying value under scope of regulatory consolidation (column b from L11) less amounts not subject to capital requirements or subject to deduction from capital (column g from L11).

(2) Exposure amounts considered for regulatory purposes represent the exposure at default amounts post-CRM and post-CCF, with the exception of the Market Risk framework that is reported at accounting carrying value.

**Explanations of differences between accounting and regulatory exposure amounts**

The table above illustrates the main sources of differences between the financial statements' carrying value amounts and the exposure at default post-CRM and post-CCF used for regulatory purposes.

**Off-balance sheet amounts** include credit exposures on committed undrawn amounts of loans and other off-balance sheet arrangements, other than derivatives, such as undrawn commitments related to Standby Letters of Credit and Documentary Credits.

**Differences due to different netting rules** relate to the grossing up of derivatives to reflect legally enforceable bilateral netting arrangements recognized for regulatory capital purposes.

**Differences due to consideration of provisions** relate to the re-inclusion of general and specific provisions in the carrying amount of exposures in the AIRB approach.

**Exposures related to liability repo-style transactions** relate to the grossing up of liability repo-style transactions.

**Potential future exposure** consists of the add-on factors for the expected volatility of the price, rate or index underlying derivative instruments.

**Differences due to consideration of CRM** consist of the application of credit risk mitigation techniques to arrive at the net exposure at default in accordance with OSFI's CAR Guideline, Chapter 5, Credit Risk Mitigation.

**CR1 - CREDIT QUALITY OF ASSETS (1)**

(\$ millions)		LINE #	Q2 2019			
			Gross carrying values of		Allowances / impairments	Net values (a + b - c)
			Defaulted exposures (2) (3)	Non-defaulted exposures		
		a	b	c	d	
Loans	1	2,515	412,035	1,481	413,069	
Debt securities	2	-	74,925	4	74,921	
Off-balance sheet exposures	3	319	167,423	243	167,499	
<b>Total</b>	<b>4</b>	<b>2,834</b>	<b>654,383</b>	<b>1,728</b>	<b>655,489</b>	

**CR1 - CREDIT QUALITY OF ASSETS (1)**

(\$ millions)		LINE #	Q1 2019			
			Gross carrying values of		Allowances / impairments	Net values (a + b - c)
			Defaulted exposures (2) (3)	Non-defaulted exposures		
		a	b	c	d	
Loans	1	2,188	396,941	1,416	397,713	
Debt securities	2	-	72,682	3	72,679	
Off-balance sheet exposures	3	331	162,957	248	163,040	
<b>Total</b>	<b>4</b>	<b>2,519</b>	<b>632,580</b>	<b>1,667</b>	<b>633,432</b>	

**CR1 - CREDIT QUALITY OF ASSETS (1)**

(\$ millions)		LINE #	Q4 2018			
			Gross carrying values of		Allowances / impairments	Net values (a + b - c)
			Defaulted exposures (2) (3)	Non-defaulted exposures		
		a	b	c	d	
Loans	1	2,038	383,712	1,465	384,285	
Debt securities	2	-	67,599	2	67,597	
Off-balance sheet exposures	3	241	154,558	229	154,570	
<b>Total</b>	<b>4</b>	<b>2,279</b>	<b>605,869</b>	<b>1,696</b>	<b>606,452</b>	

(1) Excludes positions subject to counterparty credit risk and securitization regulatory frameworks.

(2) Exposures are considered to be in default when they are 90 days past due with the following exceptions: (i) credit card loans which are immediately written off when principal or interest payments are 180 days past due; and (ii) residential mortgages guaranteed by the Government of Canada that are less than one year past due.

(3) There are no defaulted debt securities.



**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q2 2019**

**a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,188
2	Loans and debt securities that have defaulted since the last reporting period	696
3	Returned to non-defaulted status	(131)
4	Amounts written off	(111)
5	Other charges	(127)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	<b>2,515</b>

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q1 2019**

**a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,038
2	Loans and debt securities that have defaulted since the last reporting period	432
3	Returned to non-defaulted status	(129)
4	Amounts written off	(119)
5	Other charges	(34)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	<b>2,188</b>

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q4 2018**

**a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,169
2	Loans and debt securities that have defaulted since the last reporting period	417
3	Returned to non-defaulted status	(174)
4	Amounts written off	(191)
5	Other charges	(183)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	<b>2,038</b>

(1) There are no defaulted debt securities.

(2) Defaulted balances exclude off-balance sheet exposures.

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5)		Q2 2019				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
(\$ millions)						
1	Loans	350,802	62,267	-	50,752	3
2	Debt securities	74,921	-	-	-	-
3	<b>Total</b>	<b>425,723</b>	<b>62,267</b>	<b>-</b>	<b>50,752</b>	<b>3</b>
4	Of which: defaulted	1,942	171	-	160	-

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5)		Q1 2019				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
(\$ millions)						
1	Loans	336,560	61,153	-	50,593	7
2	Debt securities	72,679	-	-	-	-
3	<b>Total</b>	<b>409,239</b>	<b>61,153</b>	<b>-</b>	<b>50,593</b>	<b>7</b>
4	Of which: defaulted	1,663	154	-	149	-

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5)		Q4 2018				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
(\$ millions)						
1	Loans	325,209	59,076	-	50,801	22
2	Debt securities	67,597	-	-	-	-
3	<b>Total</b>	<b>392,806</b>	<b>59,076</b>	<b>-</b>	<b>50,801</b>	<b>22</b>
4	Of which: defaulted	1,513	155	-	149	-

- (1) Excludes positions subject to counterparty credit risk and securitization regulatory frameworks.
- (2) There are no defaulted debt securities.
- (3) Secured exposures include exposures where credit risk mitigation techniques are used to reduce capital requirement in accordance with OSFI's CAR Guideline, Chapter 5, Credit Risk Mitigation. Where collateral is reflected in the risk parameters (PDs and LGDs) for AIRB exposures and risk weights for exposures under standardized approach, the carrying amount is reported as an unsecured exposure.
- (4) Loans and Debt Securities balances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments).
- (5) Defaulted balances are net of allowance for credit losses on impaired loans, excluding off-balance sheet instruments and undrawn commitments.

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK MITIGATION (CRM) EFFECTS (1) (2)**

Asset classes	Q2 2019					
	Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
	a	b	c	d	e	f
1 Sovereigns and their central banks	15	8	15	4	-	0.00%
2 Non-central government public sector entities	158	11	158	5	34	20.69%
3 Multilateral development banks	-	-	-	-	-	0.00%
4 Banks	77	299	77	138	43	20.00%
5 Securities firms	7	50	7	18	5	20.00%
6 Corporates	18,666	8,851	18,666	3,571	21,986	98.87%
7 Regulatory retail portfolios	9,762	4,080	9,762	-	7,136	73.10%
8 Secured by residential property	4,319	187	4,319	75	1,672	38.06%
9 Secured by commercial real estate	617	115	617	59	676	100.00%
10 Equity	1,715	320	1,715	160	1,168	62.29%
11 Defaulted exposures	633	58	633	3	899	141.49%
12 Higher-risk categories (3)	133	204	133	99	348	150.00%
13 Other assets	8,907	-	8,907	-	8,314	93.34%
14 <b>Total</b>	<b>45,009</b>	<b>14,183</b>	<b>45,009</b>	<b>4,132</b>	<b>42,281</b>	<b>86.04%</b>

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK MITIGATION (CRM) EFFECTS (1) (2)**

Asset classes	Q1 2019					
	Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
	a	b	c	d	e	f
1 Sovereigns and their central banks	11	7	11	4	-	0.00%
2 Non-central government public sector entities	165	7	165	3	34	20.39%
3 Multilateral development banks	-	-	-	-	-	0.00%
4 Banks	3	186	3	90	19	20.00%
5 Securities firms	10	46	10	15	5	20.00%
6 Corporates	17,513	8,586	17,513	3,391	20,719	99.12%
7 Regulatory retail portfolios	9,018	3,936	9,018	-	6,556	72.69%
8 Secured by residential property	4,403	188	4,403	76	1,715	38.28%
9 Secured by commercial real estate	675	128	675	62	736	100.00%
10 Equity	1,603	329	1,603	164	1,120	63.38%
11 Defaulted exposures	600	42	600	19	849	137.10%
12 Higher-risk categories (3)	127	183	127	89	323	150.00%
13 Other assets	8,305	-	8,305	-	8,327	100.26%
14 <b>Total</b>	<b>42,433</b>	<b>13,638</b>	<b>42,433</b>	<b>3,913</b>	<b>40,403</b>	<b>87.17%</b>

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK MITIGATION (CRM) EFFECTS (1) (2)**

Asset classes	Q4 2018					
	Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
	a	b	c	d	e	f
1 Sovereigns and their central banks	12	7	12	3	-	0.00%
2 Non-central government public sector entities	150	23	150	12	32	20.00%
3 Multilateral development banks	-	-	-	-	-	0.00%
4 Banks	59	207	59	80	28	20.00%
5 Securities firms	7	51	7	18	5	20.00%
6 Corporates	16,450	8,850	16,450	3,450	19,722	99.11%
7 Regulatory retail portfolios	9,131	3,923	9,131	4	6,687	73.19%
8 Secured by residential property	4,408	192	4,408	74	1,728	38.54%
9 Secured by commercial real estate	694	128	694	62	756	100.00%
10 Equity	1,749	290	1,749	145	1,153	60.88%
11 Defaulted exposures	468	26	468	11	647	135.12%
12 Higher-risk categories (3)	96	129	96	65	241	150.00%
13 Other assets	8,800	-	8,800	-	8,289	94.20%
14 <b>Total</b>	<b>42,024</b>	<b>13,826</b>	<b>42,024</b>	<b>3,924</b>	<b>39,288</b>	<b>85.51%</b>

- (1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.
- (2) Exposure amounts are net of stage 3 allowance for credit losses.
- (3) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

**CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)**

(\$ millions)

Asset classes	Q2 2019										Total credit exposures amount (post-CCF and post-CRM)
	Risk Weight										
	0%	10%	20%	35%	50%	75%	100%	150%	Others		
a	b	c	d	e	f	g	h	i	j		
1 Sovereigns and their central banks	19	-	-	-	-	-	-	-	-	-	19
2 Non-central government public sector entities	-	-	159	-	4	-	-	-	-	-	163
3 Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-
4 Banks	-	-	215	-	-	-	-	-	-	-	215
5 Securities firms	-	-	25	-	-	-	-	-	-	-	25
6 Corporates	-	-	300	-	22	-	21,915	-	-	-	22,237
7 Regulatory retail portfolios	448	-	-	-	-	8,719	595	-	-	-	9,762
8 Secured by residential property	-	-	5	4,051	-	338	-	-	-	-	4,394
9 Secured by commercial real estate	-	-	-	-	-	-	676	-	-	-	676
10 Equity	484	-	362	-	-	-	1,029	-	-	-	1,875
11 Defaulted exposures	-	-	16	-	-	-	115	505	-	-	636
12 Higher-risk categories (4)	-	-	-	-	-	-	-	232	-	-	232
13 Other assets	1,928	-	2,059	-	-	-	4,661	-	259	-	8,907
14 Total	2,879	-	3,141	4,051	26	9,057	28,991	737	259	-	49,141

**CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)**

(\$ millions)

Asset classes	Q1 2019										Total credit exposures amount (post-CCF and post-CRM)
	Risk Weight										
	0%	10%	20%	35%	50%	75%	100%	150%	Others		
a	b	c	d	e	f	g	h	i	j		
1 Sovereigns and their central banks	15	-	-	-	-	-	-	-	-	-	15
2 Non-central government public sector entities	-	-	166	-	2	-	-	-	-	-	168
3 Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-
4 Banks	-	-	93	-	-	-	-	-	-	-	93
5 Securities firms	-	-	25	-	-	-	-	-	-	-	25
6 Corporates	-	-	217	-	22	-	20,665	-	-	-	20,904
7 Regulatory retail portfolios	435	-	-	-	-	8,117	466	-	-	-	9,018
8 Secured by residential property	-	-	6	4,105	-	364	4	-	-	-	4,479
9 Secured by commercial real estate	-	-	-	-	-	-	737	-	-	-	737
10 Equity	474	-	296	-	-	-	997	-	-	-	1,767
11 Defaulted exposures	-	-	17	-	-	-	116	486	-	-	619
12 Higher-risk categories (4)	-	-	-	-	-	-	-	216	-	-	216
13 Other assets	1,975	-	1,388	-	-	-	4,672	-	270	-	8,305
14 Total	2,899	-	2,208	4,105	24	8,481	27,657	702	270	-	46,346

**CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)**

(\$ millions)

Asset classes	Q4 2018										Total credit exposures amount (post-CCF and post-CRM)
	Risk Weight										
	0%	10%	20%	35%	50%	75%	100%	150%	Others		
a	b	c	d	e	f	g	h	i	j		
1 Sovereigns and their central banks	15	-	-	-	-	-	-	-	-	-	15
2 Non-central government public sector entities	-	-	162	-	-	-	-	-	-	-	162
3 Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-
4 Banks	-	-	139	-	-	-	-	-	-	-	139
5 Securities firms	-	-	25	-	-	-	-	-	-	-	25
6 Corporates	-	-	212	-	17	-	19,671	-	-	-	19,900
7 Regulatory retail portfolios	409	-	-	-	-	8,165	561	-	-	-	9,135
8 Secured by residential property	-	-	10	4,072	-	398	2	-	-	-	4,482
9 Secured by commercial real estate	-	-	-	-	-	-	756	-	-	-	756
10 Equity	476	-	413	-	-	-	1,005	-	-	-	1,894
11 Defaulted exposures	-	-	16	-	-	-	102	361	-	-	479
12 Higher-risk categories (4)	-	-	-	-	-	-	-	161	-	-	161
13 Other assets	2,430	-	1,404	-	-	-	4,701	-	265	-	8,800
14 Total	3,330	-	2,381	4,072	17	8,563	26,798	522	265	-	45,948

- (1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.
- (2) Exposure amounts are net of stage 3 allowance for credit losses.
- (3) Credit assessments by external credit rating agencies, including S&P and Moody's, are used to determine standardized risk weights based on guidelines issued by OSFI.
- (4) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

**CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)**

(\$ millions except as noted)

										Q2 2019							
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions (8)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	32,654	-	0.00 %	46,532	0.00 %	145,215	26.02 %		355	0.76 %	-	
Very low to Low		0.15 to <0.25			2	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.25 to <0.50			3	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			4	8,586	-	0.00 %	-	0.00 %	18,318	0.00 %		-	0.00 %	-	
Medium		0.75 to <2.50			5	2,648	-	0.00 %	-	0.00 %	7,153	0.00 %		-	0.00 %	-	
Medium to High		2.50 to <10.00			6	2,266	-	0.00 %	-	0.00 %	7,112	0.00 %		-	0.00 %	-	
High		10.00 to <100.00			7	227	-	0.00 %	-	0.00 %	1,124	0.00 %		-	0.00 %	-	
Default		100.00 (Default)			8	153	-	0.00 %	-	0.00 %	763	0.00 %		-	0.00 %	-	
Sub-total					9	46,534	-		46,532		179,685			355		-	-
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	47,196	26,231	39.93 %	57,669	0.07 %	391,400	16.16 %		1,774	3.08 %	7	
Very low to Low		0.15 to <0.25			11	6,998	1,363	24.75 %	7,335	0.18 %	48,816	17.54 %		506	6.90 %	2	
Low		0.25 to <0.50			12	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			13	11,336	21	70.84 %	11,351	0.61 %	40,526	15.27 %		1,633	14.39 %	10	
Medium		0.75 to <2.50			14	7,140	537	19.92 %	7,247	1.24 %	36,096	16.15 %		1,762	24.31 %	14	
Medium to High		2.50 to <10.00			15	4,473	31	21.76 %	4,480	6.92 %	12,652	13.24 %		2,427	54.17 %	41	
High		10.00 to <100.00			16	454	46	22.58 %	464	40.63 %	3,037	14.56 %		366	78.88 %	27	
Default		100.00 (Default)			17	170	13	16.93 %	172	100.00 %	1,313	12.51 %		239	138.95 %	11	
Sub-total					18	77,767	28,242		88,718		533,840			8,707		112	11
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,460	5,958	58.67 %	4,956	0.04 %	45,447	68.99 %		445	8.98 %	1	
Very low to Low		0.15 to <0.25			20	4,524	65	100.00 %	4,590	0.19 %	14,710	30.53 %		567	12.35 %	3	
Low		0.25 to <0.50			21	797	237	48.80 %	913	0.47 %	8,940	72.61 %		523	57.28 %	3	
Low		0.50 to <0.75			22	491	-	0.00 %	491	0.74 %	7,615	61.81 %		329	67.01 %	2	
Medium		0.75 to <2.50			23	1,463	38	87.83 %	1,496	1.20 %	7,504	43.25 %		991	66.24 %	8	
Medium to High		2.50 to <10.00			24	327	3	83.51 %	330	4.62 %	3,932	65.84 %		715	216.67 %	10	
High		10.00 to <100.00			25	192	56	60.59 %	225	21.97 %	2,123	47.86 %		593	263.56 %	24	
Default		100.00 (Default)			26	383	-	100.00 %	383	100.00 %	17,326	50.71 %		1,341	350.13 %	147	
Sub-total					27	9,637	6,357		13,384		107,597			5,504		198	147
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	713	37,471	57.46 %	22,245	0.05 %	2,947,607	73.13 %		487	2.19 %	7	
Very low to Low		0.15 to <0.25			29	96	2,548	70.22 %	1,885	0.17 %	358,884	89.53 %		167	8.86 %	3	
Low		0.25 to <0.50			30	30	403	75.57 %	334	0.31 %	86,021	90.74 %		50	14.97 %	1	
Low		0.50 to <0.75			31	3,411	10,295	37.99 %	7,322	0.56 %	644,059	60.32 %		1,142	15.60 %	25	
Medium		0.75 to <2.50			32	330	737	86.64 %	968	1.28 %	193,772	78.71 %		368	38.02 %	10	
Medium to High		2.50 to <10.00			33	2,349	1,371	68.78 %	3,292	3.51 %	474,332	76.39 %		2,496	75.82 %	89	
High		10.00 to <100.00			34	697	253	63.55 %	858	23.15 %	126,471	70.10 %		1,400	163.17 %	130	
Default		100.00 (Default)			35	73	26	41.30 %	84	100.00 %	4,842	54.76 %		305	363.10 %	32	
Sub-total					36	7,699	53,104		36,988		4,835,988			6,415		297	32
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,324	2,666	69.28 %	3,174	0.09 %	72,286	61.45 %		431	13.58 %	2	
Very low to Low		0.15 to <0.25			38	24	96	76.40 %	98	0.21 %	5,508	85.75 %		37	37.76 %	-	
Low		0.25 to <0.50			39	55	120	73.20 %	142	0.34 %	49,821	98.00 %		84	59.15 %	-	
Low		0.50 to <0.75			40	918	182	74.03 %	1,051	0.56 %	7,443	49.01 %		420	39.96 %	3	
Medium		0.75 to <2.50			41	584	231	78.68 %	766	1.42 %	31,623	61.95 %		575	75.07 %	7	
Medium to High		2.50 to <10.00			42	515	141	73.99 %	619	4.86 %	13,428	72.23 %		700	113.09 %	23	
High		10.00 to <100.00			43	85	15	79.58 %	96	27.82 %	3,230	69.91 %		151	157.29 %	21	
Default		100.00 (Default)			44	44	5	73.56 %	47	100.00 %	6,113	59.88 %		305	648.94 %	7	
Sub-total					45	3,549	3,456		5,993		189,452			2,703		63	7
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	8,833	3,295	49.11 %	10,810	0.07 %	317,059	21.26 %		415	3.84 %	1	
Very low to Low		0.15 to <0.25			47	7,891	613	92.33 %	8,457	0.20 %	221,257	61.58 %		2,193	25.93 %	10	
Low		0.25 to <0.50			48	1,358	776	27.99 %	1,575	0.46 %	537,075	54.72 %		622	39.49 %	4	
Low		0.50 to <0.75			49	3,842	844	31.37 %	3,900	0.59 %	51,820	34.70 %		1,114	28.56 %	8	
Medium		0.75 to <2.50			50	6,945	470	46.73 %	7,085	1.44 %	504,032	45.35 %		3,881	54.78 %	48	
Medium to High		2.50 to <10.00			51	1,941	47	37.01 %	1,897	4.74 %	183,478	40.94 %		1,179	62.15 %	32	
High		10.00 to <100.00			52	837	164	32.12 %	885	24.03 %	273,191	64.98 %		1,205	136.16 %	128	
Default		100.00 (Default)			53	195	2	31.71 %	189	100.00 %	81,583	46.63 %		504	266.67 %	78	
Sub-total					54	31,842	6,211		34,798		2,169,495			11,113		309	78
<b>Total (all retail portfolios)</b>					55	177,028	97,370		226,413		8,016,057			34,797		979	275

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Includes stage 3 allowances and partial write-offs.

**CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q2 2019											
						Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions (9)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Corporate</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	38,065	78,260	51.32 %	85,658	0.08 %	5,615	34.85 %	2.31	18,269	21.33 %	25	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	29,084	38,923	48.64 %	46,093	0.20 %	5,034	37.75 %	2.40	17,281	37.49 %	35	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	40,677	36,490	48.59 %	57,149	0.32 %	9,034	37.11 %	2.47	26,785	46.87 %	68	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	41,085	28,669	45.10 %	52,550	0.62 %	8,475	34.80 %	2.48	30,708	58.44 %	114	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	41,232	27,994	46.47 %	52,235	1.22 %	12,389	36.32 %	2.47	40,011	76.60 %	232	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	5,714	5,795	46.26 %	7,886	3.58 %	3,009	32.28 %	2.10	7,153	90.71 %	92	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	1,715	1,398	52.46 %	2,187	14.19 %	811	29.31 %	2.26	2,984	136.44 %	92	
Default	Default	100.00 (Default)	C	C to D	63	1,034	301	100.00 %	1,321	100.00 %	393	36.13 %	2.35	3,918	296.59 %	256	
Sub-total					64	198,606	217,830		305,079		44,760			147,109		914	256
<b>Sovereign</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	104,347	8,015	60.89 %	109,548	0.02 %	3,149	6.31 %	2.71	3,471	3.17 %	3	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	661	375	71.94 %	711	0.20 %	325	20.22 %	1.33	114	16.03 %	-	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	113	293	50.88 %	207	0.32 %	118	33.65 %	1.72	78	37.68 %	-	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	17	66	45.19 %	31	0.63 %	78	164.14 %	1.15	72	232.26 %	-	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	995	51	43.30 %	994	1.77 %	134	27.98 %	3.08	770	77.46 %	5	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	35	27	37.34 %	41	3.38 %	44	47.78 %	1.24	55	134.15 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	-	0.00 %	-	0.00 %	3	0.00 %	-	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	72	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					73	106,169	8,827		111,532		3,851			4,560		9	-
<b>Bank</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	11,862	4,452	77.76 %	16,583	0.07 %	176	17.25 %	1.24	1,335	8.05 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	4,747	3,679	59.47 %	6,642	0.19 %	81	13.63 %	1.53	718	10.81 %	2	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	2,328	1,901	61.73 %	3,257	0.32 %	78	14.00 %	0.97	454	13.94 %	1	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	1,105	769	61.62 %	1,345	0.55 %	50	15.36 %	0.72	283	21.04 %	1	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,781	190	99.65 %	1,488	1.09 %	47	15.37 %	0.40	418	28.09 %	3	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	37	2	50.76 %	34	2.85 %	12	14.74 %	0.19	11	32.35 %	-	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	81	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					82	21,860	10,993		29,349		444			3,219		9	-
<b>Total (all wholesale portfolios)</b>					<b>83</b>	<b>326,635</b>	<b>237,650</b>		<b>445,960</b>		<b>49,055</b>			<b>154,888</b>		<b>932</b>	<b>256</b>

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

(9) Includes stage 3 allowances and partial write-offs.

CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

										Q1 2019							
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions (8)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	32,459	-	0.00 %	46,223	0.00 %	146,311	25.60 %		345	0.75 %	-	
Very low to Low		0.15 to <0.25			2	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.25 to <0.50			3	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			4	8,568	-	0.00 %	-	0.00 %	18,140	0.00 %		-	0.00 %	-	
Medium		0.75 to <2.50			5	2,655	-	0.00 %	-	0.00 %	7,150	0.00 %		-	0.00 %	-	
Medium to High		2.50 to <10.00			6	2,219	-	0.00 %	-	0.00 %	6,892	0.00 %		-	0.00 %	-	
High		10.00 to <100.00			7	180	-	0.00 %	-	0.00 %	843	0.00 %		-	0.00 %	-	
Default		100.00 (Default)			8	143	-	0.00 %	-	0.00 %	719	0.00 %		-	0.00 %	-	
Sub-total					9	46,224	-		46,223		180,055			345		-	-
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	48,072	25,790	39.98 %	58,384	0.07 %	392,288	16.30 %		1,819	3.12 %	7	
Very low to Low		0.15 to <0.25			11	7,063	1,366	24.84 %	7,402	0.18 %	48,282	17.46 %		508	6.86 %	2	
Low		0.25 to <0.50			12	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			13	11,130	22	71.19 %	11,146	0.60 %	40,293	15.48 %		1,623	14.56 %	10	
Medium		0.75 to <2.50			14	6,969	600	19.36 %	7,086	1.24 %	35,473	16.19 %		1,736	24.50 %	14	
Medium to High		2.50 to <10.00			15	4,347	29	23.93 %	4,353	6.92 %	12,377	13.23 %		2,358	54.17 %	40	
High		10.00 to <100.00			16	346	25	20.81 %	351	40.17 %	2,323	14.33 %		273	77.78 %	19	
Default		100.00 (Default)			17	136	13	15.16 %	138	100.00 %	1,184	12.84 %		198	143.48 %	8	
Sub-total					18	78,063	27,845		88,860		532,220			8,515		100	8
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,442	5,768	58.50 %	4,816	0.04 %	45,162	68.83 %		432	8.97 %	1	
Very low to Low		0.15 to <0.25			20	4,406	73	100.00 %	4,479	0.19 %	14,876	30.33 %		550	12.28 %	3	
Low		0.25 to <0.50			21	763	255	50.03 %	891	0.47 %	8,975	72.14 %		507	56.90 %	3	
Low		0.50 to <0.75			22	507	-	0.00 %	507	0.74 %	7,910	62.24 %		342	67.46 %	2	
Medium		0.75 to <2.50			23	1,555	40	89.19 %	1,591	1.18 %	7,780	42.84 %		1,035	65.05 %	9	
Medium to High		2.50 to <10.00			24	318	4	86.12 %	322	4.71 %	3,817	65.16 %		698	216.77 %	10	
High		10.00 to <100.00			25	229	82	60.35 %	278	22.05 %	2,442	44.43 %		687	247.12 %	27	
Default		100.00 (Default)			26	397	-	100.00 %	397	100.00 %	18,452	50.57 %		1,330	335.01 %	155	
Sub-total					27	9,617	6,222		13,281		109,414			5,581		210	155
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	596	37,247	57.95 %	22,181	0.05 %	2,915,483	72.92 %		484	2.18 %	7	
Very low to Low		0.15 to <0.25			29	68	2,635	70.17 %	1,847	0.17 %	357,753	89.29 %		163	8.83 %	3	
Low		0.25 to <0.50			30	20	401	75.31 %	322	0.31 %	86,126	90.65 %		48	14.91 %	1	
Low		0.50 to <0.75			31	3,350	10,086	37.98 %	7,181	0.56 %	637,402	59.92 %		1,112	15.49 %	24	
Medium		0.75 to <2.50			32	302	725	86.19 %	927	1.29 %	192,610	77.50 %		348	37.54 %	9	
Medium to High		2.50 to <10.00			33	2,234	1,308	68.94 %	3,136	3.51 %	466,638	75.45 %		2,344	74.74 %	83	
High		10.00 to <100.00			34	644	236	64.60 %	797	21.13 %	121,315	69.47 %		1,286	161.36 %	109	
Default		100.00 (Default)			35	63	20	42.14 %	71	100.00 %	4,164	54.18 %		220	309.86 %	32	
Sub-total					36	7,277	52,558		36,462		4,781,491			6,005		268	32
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,271	2,656	69.19 %	3,111	0.09 %	73,726	61.89 %		429	13.79 %	2	
Very low to Low		0.15 to <0.25			38	18	82	77.24 %	82	0.21 %	5,508	85.22 %		30	36.59 %	-	
Low		0.25 to <0.50			39	51	131	73.05 %	147	0.35 %	50,424	98.21 %		89	60.54 %	1	
Low		0.50 to <0.75			40	884	163	73.80 %	1,002	0.56 %	7,232	49.27 %		402	40.12 %	3	
Medium		0.75 to <2.50			41	562	225	78.88 %	739	1.42 %	31,887	62.45 %		558	75.51 %	6	
Medium to High		2.50 to <10.00			42	476	128	76.74 %	575	4.82 %	13,617	71.36 %		642	111.65 %	21	
High		10.00 to <100.00			43	74	12	77.16 %	83	25.66 %	2,818	68.69 %		129	155.42 %	16	
Default		100.00 (Default)			44	33	4	72.45 %	37	100.00 %	6,010	57.02 %		219	591.89 %	6	
Sub-total					45	3,369	3,401		5,776		191,222			2,498		55	6
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	8,770	3,227	49.27 %	10,724	0.07 %	322,731	20.92 %		408	3.80 %	1	
Very low to Low		0.15 to <0.25			47	8,008	571	91.29 %	8,529	0.20 %	219,866	61.63 %		2,221	26.04 %	10	
Low		0.25 to <0.50			48	1,674	741	28.42 %	1,884	0.46 %	531,755	54.07 %		738	39.17 %	5	
Low		0.50 to <0.75			49	3,655	818	31.46 %	3,701	0.59 %	5,614	34.74 %		1,058	28.59 %	7	
Medium		0.75 to <2.50			50	7,265	515	48.95 %	7,438	1.45 %	491,444	45.93 %		4,137	55.62 %	51	
Medium to High		2.50 to <10.00			51	1,961	51	33.59 %	1,915	4.71 %	183,388	41.63 %		1,209	63.13 %	33	
High		10.00 to <100.00			52	804	142	33.17 %	846	23.39 %	257,003	67.15 %		1,192	140.90 %	125	
Default		100.00 (Default)			53	191	2	31.54 %	186	100.00 %	85,066	46.88 %		470	252.69 %	80	
Sub-total					54	32,328	6,067		35,223		2,142,867			11,433		312	80
<b>Total (all retail portfolios)</b>					55	176,878	96,093		225,825		7,937,269			34,377		945	281

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Includes stage 3 allowances and partial write-offs.

**CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q1 2019											
						Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions (9)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Corporate</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	36,061	74,145	50.44 %	80,903	0.08 %	5,598	35.32 %	2.27	16,691	20.63 %	24	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	26,946	37,972	49.03 %	43,478	0.20 %	5,003	37.79 %	2.42	16,434	37.80 %	33	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	38,532	35,645	49.21 %	54,979	0.32 %	8,941	36.66 %	2.53	25,676	46.70 %	65	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	36,895	28,190	46.16 %	46,477	0.62 %	8,240	35.64 %	2.48	28,988	59.80 %	107	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	38,253	29,077	46.84 %	49,743	1.22 %	12,328	36.24 %	2.48	37,931	76.25 %	220	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	5,563	5,157	43.67 %	7,302	3.64 %	3,071	31.49 %	1.95	6,342	86.85 %	83	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	1,279	679	58.96 %	1,507	14.02 %	800	32.28 %	1.71	2,166	143.73 %	69	
Default	Default	100.00 (Default)	C	C to D	63	826	325	99.99 %	1,134	100.00 %	396	35.82 %	2.57	3,099	273.28 %	240	
Sub-total					64	184,355	211,190		287,523		44,377			137,327		841	
<b>Sovereign</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	107,760	8,112	61.53 %	112,952	0.02 %	3,104	4.24 %	2.58	3,092	2.74 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	740	406	74.16 %	898	0.20 %	321	19.92 %	1.20	137	15.26 %	-	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	217	279	50.52 %	345	0.32 %	125	20.49 %	1.75	82	23.77 %	-	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	194	50	49.33 %	202	0.59 %	75	24.14 %	1.55	73	36.14 %	-	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	914	56	42.32 %	914	0.97 %	99	33.36 %	3.00	696	76.15 %	3	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	34	14	48.90 %	37	3.44 %	35	45.08 %	1.30	47	127.03 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	-	0.00 %	-	0.00 %	2	0.00 %	-	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	72	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					73	109,860	8,917		115,348		3,761			4,127		6	
<b>Bank</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	11,287	4,444	77.80 %	16,109	0.07 %	178	16.67 %	1.20	1,188	7.37 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	5,045	3,438	59.95 %	6,676	0.19 %	87	12.99 %	1.50	697	10.44 %	2	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	2,267	2,063	63.07 %	3,287	0.32 %	77	14.72 %	0.75	459	13.96 %	2	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	1,298	878	60.58 %	1,610	0.55 %	53	13.86 %	0.70	292	18.14 %	1	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,967	168	86.66 %	1,686	1.07 %	50	15.23 %	0.39	479	28.41 %	3	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	57	1	51.60 %	53	3.02 %	15	14.82 %	0.14	18	33.96 %	-	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	-	-	100.00 %	-	14.66 %	1	30.00 %	1.00	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	81	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					82	21,921	10,992		29,421		461			3,133		10	
<b>Total (all wholesale portfolios)</b>					<b>83</b>	<b>316,136</b>	<b>231,099</b>		<b>432,292</b>		<b>48,599</b>			<b>144,587</b>		<b>857</b>	

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

(9) Includes stage 3 allowances and partial write-offs.



CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

										Q4 2018							
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions (8)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	33,381	-	0.00 %	47,203	0.00 %	150,223	25.24 %		339	0.72 %	-	
Very low to Low		0.15 to <0.25			2	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.25 to <0.50			3	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			4	8,616	-	0.00 %	-	0.00 %	18,313	0.00 %		-	0.00 %	-	
Medium		0.75 to <2.50			5	2,660	-	0.00 %	-	0.00 %	7,200	0.00 %		-	0.00 %	-	
Medium to High		2.50 to <10.00			6	2,218	-	0.00 %	-	0.00 %	6,803	0.00 %		-	0.00 %	-	
High		10.00 to <100.00			7	186	-	0.00 %	-	0.00 %	894	0.00 %		-	0.00 %	-	
Default		100.00 (Default)			8	142	-	0.00 %	-	0.00 %	729	0.00 %		-	0.00 %	-	
Sub-total					9	47,203	-		47,203		184,162			339			-
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	46,826	25,187	39.75 %	56,839	0.07 %	385,333	16.20 %		1,758	3.09 %	7	
Very low to Low		0.15 to <0.25			11	7,407	1,461	25.23 %	7,776	0.18 %	50,398	17.31 %		529	6.81 %	2	
Low		0.25 to <0.50			12	-	-	0.00 %	-	0.00 %	-	0.00 %		-	0.00 %	-	
Low		0.50 to <0.75			13	10,309	23	71.83 %	10,326	0.60 %	40,602	14.75 %		1,419	13.74 %	9	
Medium		0.75 to <2.50			14	6,848	576	20.29 %	6,965	1.24 %	34,761	15.71 %		1,654	23.75 %	13	
Medium to High		2.50 to <10.00			15	4,198	29	23.31 %	4,205	6.92 %	12,105	13.06 %		2,247	53.43 %	38	
High		10.00 to <100.00			16	379	32	21.21 %	386	38.20 %	2,510	14.18 %		302	78.20 %	20	
Default		100.00 (Default)			17	149	10	13.44 %	150	100.00 %	1,098	14.11 %		246	163.71 %	8	
Sub-total					18	76,116	27,318		86,647		526,807			8,155		97	8
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,481	5,764	58.41 %	4,847	0.03 %	45,447	68.48 %		324	6.69 %	1	
Very low to Low		0.15 to <0.25			20	4,526	80	100.00 %	4,606	0.18 %	15,256	30.18 %		547	11.87 %	3	
Low		0.25 to <0.50			21	791	253	49.64 %	917	0.28 %	9,093	71.67 %		361	39.37 %	2	
Low		0.50 to <0.75			22	511	-	0.00 %	511	0.74 %	7,910	62.40 %		346	67.67 %	2	
Medium		0.75 to <2.50			23	1,713	44	87.38 %	1,751	1.13 %	10,025	44.62 %		1,125	64.25 %	9	
Medium to High		2.50 to <10.00			24	172	1	93.62 %	173	4.66 %	1,657	54.50 %		321	186.24 %	5	
High		10.00 to <100.00			25	226	116	61.20 %	297	23.25 %	2,521	43.62 %		719	241.95 %	29	
Default		100.00 (Default)			26	415	-	0.00 %	415	100.00 %	18,630	50.01 %		1,369	330.13 %	160	
Sub-total					27	9,835	6,258		13,517		110,539			5,112		211	160
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,032	36,428	56.28 %	21,533	0.05 %	2,841,494	72.52 %		488	2.27 %	7	
Very low to Low		0.15 to <0.25			29	179	2,558	68.02 %	1,919	0.17 %	353,928	89.17 %		166	8.65 %	3	
Low		0.25 to <0.50			30	3,342	9,451	36.17 %	6,761	0.35 %	545,514	58.01 %		691	10.22 %	14	
Low		0.50 to <0.75			31	194	926	76.16 %	900	0.55 %	195,495	90.00 %		205	22.80 %	4	
Medium		0.75 to <2.50			32	1,976	1,504	64.73 %	2,949	1.58 %	315,003	74.25 %		1,238	41.98 %	34	
Medium to High		2.50 to <10.00			33	1,177	709	92.65 %	1,833	5.08 %	379,920	79.95 %		1,807	98.56 %	72	
High		10.00 to <100.00			34	396	207	64.94 %	531	26.36 %	106,424	71.43 %		962	181.26 %	96	
Default		100.00 (Default)			35	65	19	41.50 %	73	100.00 %	4,202	53.93 %		222	303.14 %	33	
Sub-total					36	8,361	51,802		36,499		4,741,980			5,779		263	33
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,281	2,586	73.87 %	3,194	0.09 %	74,336	60.97 %		437	13.69 %	2	
Very low to Low		0.15 to <0.25			38	17	76	77.05 %	75	0.21 %	5,508	85.86 %		28	37.60 %	-	
Low		0.25 to <0.50			39	56	132	75.04 %	155	0.35 %	51,076	98.00 %		93	59.93 %	1	
Low		0.50 to <0.75			40	851	270	80.39 %	1,065	0.56 %	27,945	52.10 %		454	42.60 %	3	
Medium		0.75 to <2.50			41	537	98	79.11 %	614	1.49 %	11,941	58.89 %		449	73.13 %	5	
Medium to High		2.50 to <10.00			42	440	118	78.50 %	532	4.80 %	13,808	72.26 %		601	112.95 %	19	
High		10.00 to <100.00			43	64	10	78.50 %	73	26.47 %	2,692	68.80 %		113	156.30 %	14	
Default		100.00 (Default)			44	30	4	82.90 %	33	100.00 %	5,939	57.21 %		196	595.53 %	5	
Sub-total					45	3,276	3,294		5,741		193,245			2,371		49	5
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	9,742	3,188	49.26 %	11,685	0.07 %	367,834	22.07 %		471	4.03 %	2	
Very low to Low		0.15 to <0.25			47	6,944	561	91.53 %	7,458	0.18 %	173,682	65.16 %		2,034	27.28 %	9	
Low		0.25 to <0.50			48	3,275	1,460	30.04 %	3,713	0.38 %	558,953	53.94 %		1,297	34.93 %	8	
Low		0.50 to <0.75			49	3,331	40	47.52 %	3,138	0.61 %	108,859	30.02 %		799	25.45 %	6	
Medium		0.75 to <2.50			50	6,544	271	37.67 %	6,561	1.44 %	421,025	45.34 %		3,624	55.23 %	44	
Medium to High		2.50 to <10.00			51	1,545	10	41.01 %	1,484	6.13 %	192,380	38.40 %		911	61.35 %	34	
High		10.00 to <100.00			52	474	330	50.33 %	635	28.52 %	247,542	79.71 %		1,154	181.72 %	126	
Default		100.00 (Default)			53	199	2	35.02 %	193	100.00 %	83,821	47.43 %		501	259.21 %	83	
Sub-total					54	32,054	5,862		34,867		2,154,096			10,791		312	83
<b>Total (all retail portfolios)</b>					<b>55</b>	<b>176,845</b>	<b>94,534</b>		<b>224,474</b>		<b>7,910,829</b>			<b>32,547</b>		<b>932</b>	<b>289</b>

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Includes stage 3 allowances and partial write-offs.

**CR6 - IRB - CREDIT EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q4 2018											
						Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions (9)
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Corporate</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	33,904	71,858	49.85 %	76,384	0.08 %	5,499	35.28 %	2.21	16,097	21.07 %	22	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	24,088	35,589	49.47 %	40,204	0.20 %	4,902	37.73 %	2.48	15,836	39.39 %	31	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	35,523	33,948	49.16 %	50,999	0.32 %	8,852	36.39 %	2.47	23,659	46.39 %	60	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	35,093	27,744	46.75 %	46,631	0.66 %	8,034	36.10 %	2.46	29,290	62.81 %	112	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	37,629	27,247	46.83 %	49,010	1.25 %	12,227	36.83 %	2.54	39,077	79.73 %	225	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	5,533	5,501	48.42 %	7,203	3.65 %	3,119	32.66 %	2.07	6,583	91.39 %	87	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	1,462	793	51.95 %	1,736	14.29 %	825	32.06 %	1.62	2,483	143.06 %	81	
Default	Default	100.00 (Default)	C	C to D	63	907	266	99.99 %	1,161	100.00 %	451	39.21 %	2.64	3,459	298.05 %	270	
Sub-total					64	174,139	202,946		273,328		43,909			136,484		888	
<b>Sovereign</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	105,767	7,799	59.56 %	110,569	0.02 %	2,956	3.99 %	2.49	2,980	2.70 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	672	389	73.83 %	926	0.20 %	307	21.15 %	1.18	149	16.07 %	-	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	218	367	53.86 %	335	0.34 %	126	21.81 %	1.78	88	26.39 %	-	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	1,520	30	32.85 %	1,514	0.63 %	83	2.19 %	1.31	44	2.92 %	-	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	124	35	42.93 %	117	1.09 %	93	39.28 %	1.80	93	79.92 %	1	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	41	4	42.71 %	39	4.33 %	42	31.03 %	1.58	39	99.26 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	-	-	0.00 %	-	0.00 %	1	0.00 %	-	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	72	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					73	108,342	8,624		113,500		3,608			3,393		4	
<b>Bank</b>																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	12,226	3,918	77.60 %	15,705	0.07 %	189	24.64 %	1.11	1,833	11.67 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	2,813	2,692	62.46 %	4,494	0.19 %	82	16.42 %	0.73	519	11.55 %	1	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	1,151	2,131	61.37 %	2,429	0.32 %	72	16.23 %	0.61	394	16.24 %	1	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	1,390	634	62.17 %	1,765	0.55 %	56	13.73 %	0.53	292	16.52 %	1	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,832	32	98.38 %	1,479	1.16 %	47	15.20 %	0.34	421	28.49 %	3	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	63	3	91.03 %	61	3.31 %	13	14.91 %	0.17	22	35.91 %	-	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Default	Default	100.00 (Default)	C	C to D	81	-	-	0.00 %	-	0.00 %	-	0.00 %	-	-	0.00 %	-	
Sub-total					82	19,475	9,410		25,933		459			3,481		8	
<b>Total (all wholesale portfolios)</b>					<b>83</b>	<b>301,956</b>	<b>220,980</b>		<b>412,761</b>		<b>47,976</b>			<b>143,358</b>		<b>900</b>	

(1) Credit risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure preconversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

(9) Includes stage 3 allowances and partial write-offs.

**CR7 - IRB - EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM TECHNIQUES**

(\$ millions)

		Q2 2019	
		Pre-credit Derivatives RWA	Actual RWA
		a	b
<b>Portfolio</b>			
1 Corporate - AIRB	13	8	
2 Sovereign - AIRB	-	-	
3 Bank - AIRB	-	-	
4 <b>Total</b>	13	8	

**CR7 - IRB - EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM TECHNIQUES**

(\$ millions)

		Q1 2019	
		Pre-credit Derivatives RWA	Actual RWA
		a	b
<b>Portfolio</b>			
1 Corporate - AIRB	25	16	
2 Sovereign - AIRB	-	-	
3 Bank - AIRB	-	-	
4 <b>Total</b>	25	16	

**CR7 - IRB - EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CRM TECHNIQUES**

(\$ millions)

		Q4 2018	
		Pre-credit Derivatives RWA	Actual RWA
		a	b
<b>Portfolio</b>			
1 Corporate - AIRB	43	26	
2 Sovereign - AIRB	-	-	
3 Bank - AIRB	-	-	
4 <b>Total</b>	43	26	

**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK AND COUNTERPARTY CREDIT RISK EXPOSURES**

(\$ millions)

	Q2 2019		
	Credit risk, of which		Counterparty credit risk (6)
	AIRB	Standardized	
a	b	c	
1 RWA as at beginning of reporting period (1)	178,964	40,403	15,278
2 Asset size (2)	8,588	1,273	963
3 Asset quality (3)	(81)	33	(209)
4 Model updates (4)	-	-	-
5 Methodology and policy (5)	253	-	(86)
6 Acquisitions and disposals	-	-	-
7 Foreign exchange movements	1,961	572	(85)
8 Other	-	-	-
9 RWA as at end of reporting period	189,685	42,281	15,861

**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK AND COUNTERPARTY CREDIT RISK EXPOSURES**

(\$ millions)

	Q1 2019		
	Credit risk, of which		Counterparty credit risk (6)
	AIRB	Standardized	
a	b	c	
1 RWA as at beginning of reporting period (1)	175,905	39,288	13,481
2 Asset size (2)	9,195	1,126	(1,727)
3 Asset quality (3)	(2,443)	62	(74)
4 Model updates (4)	-	-	-
5 Methodology and policy (5)	(3,438)	-	3,558
6 Acquisitions and disposals	-	-	-
7 Foreign exchange movements	(255)	(73)	40
8 Other	-	-	-
9 RWA as at end of reporting period	178,964	40,403	15,278

**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK AND COUNTERPARTY CREDIT RISK EXPOSURES**

(\$ millions)

	Q4 2018		
	Credit risk, of which		Counterparty credit risk (6)
	AIRB	Standardized	
a	b	c	
1 RWA as at beginning of reporting period (1)	169,612	38,071	12,978
2 Asset size (2)	6,497	911	28
3 Asset quality (3)	(2,206)	(96)	(301)
4 Model updates (4)	(29)	-	-
5 Methodology and policy (5)	866	-	135
6 Acquisitions and disposals	-	49	572
7 Foreign exchange movements	1,165	353	69
8 Other	-	-	-
9 RWA as at end of reporting period	175,905	39,288	13,481

(1) Credit risk excludes Securitization, Equity Investment in Funds, Settlement risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Asset size includes organic changes in book size and composition (including new business and maturing loans).

(3) Asset quality captures the quality of book changes caused by experience such as underlying customer behaviour or demographics, including changes through model calibrations/realignments.

(4) Model updates includes model implementation, change in model scope or any change to address model malfunctions.

(5) Methodology and policy includes methodology changes to the calculations driven by regulatory policy changes, such as new or revised regulation.

(6) Counterparty credit risk includes RWA for derivatives, SFTs, trades cleared through central counterparties and CVA adjustment.

**EXPOSURE COVERED BY CREDIT RISK MITIGATION (1)**

LINE #	Q2 2019				Q1 2019				Q4 2018				
	Standardized		AIRB		Standardized		AIRB		Standardized		AIRB		
	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	
(\$ millions)													
Corporate (incl specialized lending and SMEs treated as corporate)	1	23,505	262	305,079	10,225	22,182	183	287,523	10,037	21,002	178	273,328	9,592
Sovereign	2	182	-	111,532	462	183	-	115,348	395	178	-	113,500	330
Bank	3	239	-	29,349	1,565	119	-	29,421	1,791	164	-	25,933	660
<b>Total Wholesale</b>	<b>4</b>	<b>23,926</b>	<b>262</b>	<b>445,960</b>	<b>12,252</b>	<b>22,484</b>	<b>183</b>	<b>432,292</b>	<b>12,223</b>	<b>21,344</b>	<b>178</b>	<b>412,761</b>	<b>10,582</b>
Residential mortgages excluding home equity line of credits (HELOCs)	5	4,354	16	103,242	45,584	4,450	18	102,980	45,233	4,376	10	102,209	46,233
HELOCs	6	217	-	45,392	-	228	-	45,384	-	225	-	45,158	-
Other retail	7	3,033	450	34,798	1,815	2,478	437	35,223	1,882	2,724	422	34,867	1,952
Qualifying revolving retail	8	-	-	36,988	-	-	-	36,462	-	-	-	36,499	-
Retail SMEs	9	6,829	-	5,993	4	6,634	-	5,776	4	6,585	-	5,741	6
<b>Total Retail</b>	<b>10</b>	<b>14,433</b>	<b>466</b>	<b>226,413</b>	<b>47,403</b>	<b>13,790</b>	<b>455</b>	<b>225,825</b>	<b>47,119</b>	<b>13,910</b>	<b>432</b>	<b>224,474</b>	<b>48,191</b>
Other assets	11	8,907	-	-	-	8,305	-	-	-	8,800	-	-	-
Equity	12	1,875	-	-	-	1,767	-	-	-	1,894	-	-	-
<b>Total Bank</b>	<b>13</b>	<b>49,141</b>	<b>728</b>	<b>672,373</b>	<b>59,655</b>	<b>46,346</b>	<b>638</b>	<b>658,117</b>	<b>59,342</b>	<b>45,948</b>	<b>610</b>	<b>637,235</b>	<b>58,773</b>

**CREDIT RISK EXPOSURE BY GEOGRAPHIC REGION**

LINE #	Q2 2019				Q1 2019				Q4 2018				
	Canada	U.S.	Other	Total	Canada	U.S.	Other	Total	Canada	U.S.	Other	Total	
Corporate (incl specialized lending and SMEs treated as corporate)	14	137,554	181,744	9,286	328,584	133,840	168,723	7,142	309,705	128,517	158,498	7,315	294,330
Sovereign	15	32,433	62,160	17,121	111,714	31,595	68,202	15,734	115,531	31,795	71,150	10,733	113,678
Bank	16	4,292	6,864	18,432	29,588	4,853	6,626	18,061	29,540	1,613	9,106	15,378	26,097
<b>Total Wholesale</b>	<b>17</b>	<b>174,279</b>	<b>250,768</b>	<b>44,839</b>	<b>469,866</b>	<b>170,288</b>	<b>243,551</b>	<b>40,937</b>	<b>454,776</b>	<b>161,925</b>	<b>238,754</b>	<b>33,426</b>	<b>434,105</b>
Residential mortgages excluding home equity line of credits (HELOCs)	18	96,519	11,077	-	107,596	96,241	11,189	-	107,430	95,338	11,247	-	106,585
HELOCs	19	38,732	6,877	-	45,609	38,842	6,770	-	45,612	38,533	6,850	-	45,383
Other retail	20	27,775	9,491	565	37,831	28,693	8,553	455	37,701	29,098	8,035	458	37,591
Qualifying revolving retail	21	36,931	57	-	36,988	36,404	58	-	36,462	36,443	56	-	36,499
Retail SMEs	22	6,098	6,724	-	12,822	5,912	6,498	-	12,410	5,882	6,444	-	12,326
<b>Total Retail</b>	<b>23</b>	<b>206,055</b>	<b>34,226</b>	<b>565</b>	<b>240,846</b>	<b>206,092</b>	<b>33,068</b>	<b>455</b>	<b>239,615</b>	<b>205,294</b>	<b>32,632</b>	<b>458</b>	<b>238,384</b>
Other assets	24	5,340	3,285	282	8,907	4,631	3,415	259	8,305	4,537	4,001	262	8,800
Equity	25	51	1,611	213	1,875	43	1,524	200	1,767	68	1,582	244	1,894
<b>Total Bank</b>	<b>26</b>	<b>385,725</b>	<b>289,890</b>	<b>45,899</b>	<b>721,514</b>	<b>381,054</b>	<b>281,558</b>	<b>41,851</b>	<b>704,463</b>	<b>371,824</b>	<b>276,969</b>	<b>34,390</b>	<b>683,183</b>

**CREDIT RISK EXPOSURE BY MAJOR ASSET CLASS**

LINE #	Q2 2019				Q1 2019				Q4 2018	
	Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Total	
Corporate (incl specialized lending and SMEs treated as corporate)	27	218,356	92,873	17,355	328,584	202,977	89,748	16,980	309,705	294,330
Sovereign	28	106,344	3,747	1,623	111,714	110,035	3,884	1,612	115,531	113,678
Bank	29	21,945	5,147	2,496	29,588	21,936	5,074	2,530	29,540	26,097
<b>Total Wholesale</b>	<b>30</b>	<b>346,645</b>	<b>101,767</b>	<b>21,474</b>	<b>469,866</b>	<b>334,948</b>	<b>98,706</b>	<b>21,122</b>	<b>454,776</b>	<b>434,105</b>
Residential mortgages excluding home equity line of credits (HELOCs)	31	107,447	98	51	107,596	107,244	109	77	107,430	106,585
HELOCs	32	31,009	14,600	-	45,609	31,261	14,351	-	45,612	45,383
Other retail	33	34,874	2,956	1	37,831	34,804	2,896	1	37,701	37,591
Qualifying revolving retail	34	7,697	29,291	-	36,988	7,278	29,184	-	36,462	36,499
Retail SMEs	35	10,378	2,399	45	12,822	10,004	2,359	47	12,410	12,326
<b>Total Retail</b>	<b>36</b>	<b>191,405</b>	<b>49,344</b>	<b>97</b>	<b>240,846</b>	<b>190,591</b>	<b>48,899</b>	<b>125</b>	<b>239,615</b>	<b>238,384</b>
Other assets	37	8,907	-	-	8,907	8,305	-	-	8,305	8,800
Equity	38	1,715	160	-	1,875	1,603	164	-	1,767	1,894
<b>Total Bank</b>	<b>39</b>	<b>548,672</b>	<b>151,271</b>	<b>21,571</b>	<b>721,514</b>	<b>535,447</b>	<b>147,769</b>	<b>21,247</b>	<b>704,463</b>	<b>683,183</b>

(1) Credit risk mitigants herein include only credit derivatives and guarantees. Collateral is reflected in the risk parameters (PDs, LGDs) for AIRB exposures and risk weights for exposures under the Standardized approach.

(2) The EAD on the difference between the authorized and drawn amounts (e.g. the unused portion of a line of credit).

(3) All other off-balance sheet arrangements, other than derivatives and undrawn commitments, such as Standby Letters of Credit and Documentary Credits.

**CREDIT RISK BY RESIDUAL CONTRACT MATURITY BREAKDOWN**

(\$ millions)	LINE #	Q2 2019				Q1 2019				Q4 2018
		Drawn	Commitments (undrawn) (1)	Other off-balance sheet items (2)	Total	Drawn	Commitments (undrawn) (1)	Other off-balance sheet items (2)	Total	Total
Up to 1 year	1	173,296	85,304	16,432	275,032	177,798	86,341	15,745	279,884	277,128
1 to 5 years	2	304,890	60,132	5,009	370,031	292,379	56,361	5,367	354,107	338,523
Greater than 5 years	3	70,486	5,835	130	76,451	65,270	5,067	135	70,472	67,532
<b>Total Bank</b>	<b>4</b>	<b>548,672</b>	<b>151,271</b>	<b>21,571</b>	<b>721,514</b>	<b>535,447</b>	<b>147,769</b>	<b>21,247</b>	<b>704,463</b>	<b>683,183</b>

**CREDIT RISK EXPOSURE BY INDUSTRY**

(\$ millions)	LINE #	Q2 2019				Q1 2019				Q4 2018
		Drawn	Commitments (undrawn) (1)	Other off-balance sheet items (2)	Total	Drawn	Commitments (undrawn) (1)	Other off-balance sheet items (2)	Total	Total
Agriculture	5	12,224	2,016	38	14,278	11,523	2,108	31	13,662	13,398
Communications	6	928	1,174	309	2,411	800	1,046	516	2,362	1,982
Construction	7	4,125	3,023	1,229	8,377	3,622	2,941	1,107	7,670	7,533
Financial	8	102,407	23,410	6,156	131,973	105,034	22,753	5,899	133,686	129,218
Forest products	9	1,057	420	82	1,559	823	428	71	1,322	1,241
Government	10	47,409	2,093	688	50,190	46,792	2,143	677	49,612	47,337
Individual	11	191,405	49,344	97	240,846	190,589	48,898	124	239,611	238,384
Manufacturing	12	27,325	14,805	1,494	43,624	25,038	14,635	1,529	41,202	37,615
Mining	13	2,576	3,957	1,300	7,833	2,058	3,608	1,319	6,985	6,754
Oil and Gas	14	11,296	11,934	1,799	25,029	10,101	12,351	1,944	24,396	21,359
Other	15	16,636	494	345	17,475	15,906	513	313	16,732	18,877
Real estate	16	35,918	8,668	858	45,444	34,240	8,390	810	43,440	40,527
Retail trade	17	22,593	3,765	573	26,931	20,878	3,968	546	25,392	24,156
Service industries	18	43,984	13,307	2,653	59,944	40,709	12,696	2,546	55,951	54,163
Transportation	19	7,618	2,668	708	10,994	7,288	2,376	707	10,371	9,894
Utilities	20	4,767	5,627	2,687	13,081	4,321	4,505	2,545	11,371	11,073
Wholesale trade	21	16,404	4,566	555	21,525	15,725	4,410	563	20,698	19,672
<b>Total Bank</b>	<b>22</b>	<b>548,672</b>	<b>151,271</b>	<b>21,571</b>	<b>721,514</b>	<b>535,447</b>	<b>147,769</b>	<b>21,247</b>	<b>704,463</b>	<b>683,183</b>

(1) The EAD on the difference between the authorized and drawn amounts (e.g. the unused portion of a line of credit).

(2) All other off-balance sheet arrangements, other than derivatives and undrawn commitments, such as Standby Letters of Credit and Documentary Credits.

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

		Q2 2019					
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
		a	b	c	d	e	f
(\$ millions except as noted)							
1	SA-CCR (for derivatives) (2)	6,286	14,472		1.4	28,940	6,827
2	Internal Model Method (for derivatives and SFTs)			-	-	-	-
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					19,519	2,877
5	VaR for SFTs					-	-
6	Total						9,704

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

		Q1 2019					
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
		a	b	c	d	e	f
(\$ millions except as noted)							
1	SA-CCR (for derivatives) (2)	5,747	13,679		1.4	27,061	6,227
2	Internal Model Method (for derivatives and SFTs)			-	-	-	-
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					24,709	2,594
5	VaR for SFTs					-	-
6	Total						8,821

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

		Q4 2018					
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
		a	b	c	d	e	f
(\$ millions except as noted)							
1	Current exposure method (CEM) (for derivatives)	9,112	17,855			26,370	4,746
2	Internal Model Method (for derivatives and SFTs)			-	-	-	-
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					22,212	3,171
5	VaR for SFTs					-	-
6	Total						7,917

(1) Excludes credit valuation adjustment charges and exposures cleared through a central counterparty.

(2) Effective Q1 2019, CCR for derivatives is calculated using the SA-CCR in accordance with the CAR Guideline issued by OSFI on October 30, 2018.

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q2 2019	
		EAD post-CRM	RWA
		a	b
	Total portfolios subject to the Advanced CVA capital charge	-	-
1	(i) VaR component (including the 3×multiplier)	-	-
2	(ii) Stressed VaR component (including the 3×multiplier)	-	-
3	All portfolios subject to the Standardized CVA capital charge (1)	20,343	5,622
4	Total subject to the CVA capital charge	20,343	5,622

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q1 2019	
		EAD post-CRM	RWA
		a	b
	Total portfolios subject to the Advanced CVA capital charge	-	-
1	(i) VaR component (including the 3×multiplier)	-	-
2	(ii) Stressed VaR component (including the 3×multiplier)	-	-
3	All portfolios subject to the Standardized CVA capital charge (1)	18,855	5,889
4	Total subject to the CVA capital charge	18,855	5,889

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q4 2018	
		EAD post-CRM	RWA
		a	b
	Total portfolios subject to the Advanced CVA capital charge	-	-
1	(i) VaR component (including the 3×multiplier)	-	-
2	(ii) Stressed VaR component (including the 3×multiplier)	-	-
3	All portfolios subject to the Standardized CVA capital charge (1)	22,272	4,900
4	Total subject to the CVA capital charge	22,272	4,900

(1) Effective Q1 2019 RWA for CVA is no longer scaled while Q4 2018 RWA reflects CET1 scalar of 80% adjustment for CVA phase-in.



**CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTS (1)**

(\$ millions)

Regulatory portfolio		Q2 2019								
		Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
LINE #	a	b	c	d	e	f	g	h	i	
Sovereigns	1	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)	2	-	-	1	-	-	-	-	-	1
Multilateral development banks (MDBs)	3	-	-	-	-	-	-	-	-	-
Banks	4	-	-	218	-	-	-	-	-	218
Securities firms	5	-	-	1	-	-	-	-	-	1
Corporates	6	-	-	-	-	-	149	-	-	149
Regulatory retail portfolios	7	-	-	-	-	-	-	-	-	-
Secured by residential property	8	-	-	-	-	-	-	-	-	-
Secured by commercial real estate	9	-	-	-	-	-	3	-	-	3
Equity	10	-	-	-	-	-	-	-	-	-
Defaulted exposures	11	-	-	-	-	-	-	-	-	-
Higher-risk categories (2)	12	-	-	-	-	-	-	1	-	1
Other assets	13	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>14</b>	-	-	<b>220</b>	-	-	<b>152</b>	<b>1</b>	-	<b>373</b>

**CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTS (1)**

(\$ millions)

Regulatory portfolio		Q1 2019								
		Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
LINE #	a	b	c	d	e	f	g	h	i	
Sovereigns	1	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)	2	-	-	1	-	-	-	-	-	1
Multilateral development banks (MDBs)	3	-	-	-	-	-	-	-	-	-
Banks	4	-	-	156	-	-	-	-	-	156
Securities firms	5	-	-	2	-	-	-	-	-	2
Corporates	6	-	-	-	-	-	195	-	-	195
Regulatory retail portfolios	7	-	-	-	-	-	-	-	-	-
Secured by residential property	8	-	-	-	-	-	-	-	-	-
Secured by commercial real estate	9	-	-	-	-	-	3	-	-	3
Equity	10	-	-	-	-	-	-	-	-	-
Defaulted exposures	11	-	-	-	-	-	-	-	-	-
Higher-risk categories (2)	12	-	-	-	-	-	-	1	-	1
Other assets	13	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>14</b>	-	-	<b>159</b>	-	-	<b>198</b>	<b>1</b>	-	<b>358</b>

**CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTS (1)**

(\$ millions)

Regulatory portfolio		Q4 2018								
		Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
LINE #	a	b	c	d	e	f	g	h	i	
Sovereigns	1	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)	2	-	-	2	-	-	-	-	-	2
Multilateral development banks (MDBs)	3	-	-	-	-	-	-	-	-	-
Banks	4	-	-	296	-	-	-	-	-	296
Securities firms	5	-	-	-	-	-	-	-	-	-
Corporates	6	-	-	-	-	-	581	-	-	581
Regulatory retail portfolios	7	-	-	-	-	-	-	-	-	-
Secured by residential property	8	-	-	-	-	-	-	-	-	-
Secured by commercial real estate	9	-	-	-	-	-	1	-	-	1
Equity	10	-	-	-	-	-	-	-	-	-
Defaulted exposures	11	-	-	-	-	-	-	-	-	-
Higher-risk categories (2)	12	-	-	-	-	-	-	1	-	1
Other assets	13	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>14</b>	-	-	<b>298</b>	-	-	<b>582</b>	<b>1</b>	-	<b>881</b>

(1) Excludes credit valuation adjustment charges and exposures cleared through a central counterparty.

(2) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

**CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q2 2019						
						EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
						a	b	c	d	e	f	g
<b>Corporate</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	12,818	0.05%	2,974	26.76%	1.10	1,233	9.62%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	1,590	0.19%	508	40.53%	2.15	609	38.30%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	1,557	0.32%	481	52.00%	2.53	980	62.94%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	2,186	0.62%	507	33.19%	1.49	1,141	52.20%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	1,849	1.35%	672	33.95%	1.50	1,414	76.47%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	553	3.12%	293	35.23%	1.63	546	98.73%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	67	13.05%	17	16.05%	1.35	50	74.63%
Default	Default	100.00 (Default)	C	C to D	8	-	100.00%	4	45.00%	1.63	-	0.00%
Sub-total					9	20,620		5,456			5,973	
<b>Sovereign</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	8,586	0.04%	222	11.62%	2.37	340	3.96%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	19	0.19%	4	38.74%	0.96	5	26.32%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	97	0.32%	7	27.22%	0.41	23	23.71%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	-	0.00%	-	0.00%	0.00	-	0.00%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	7	0.92%	2	39.74%	1.01	5	71.43%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	1	5.16%	1	40.00%	1.00	1	100.00%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	17	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					18	8,710		236			374	
<b>Bank</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	17,136	0.07%	256	34.33%	1.13	2,628	15.34%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	821	0.19%	99	39.08%	0.60	246	29.96%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	353	0.32%	53	34.97%	0.59	112	31.73%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	438	0.54%	27	36.26%	0.10	167	38.13%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	4	1.32%	11	48.03%	1.00	4	100.00%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	4	2.74%	7	35.00%	1.00	4	100.00%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	26	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					27	18,756		453			3,161	
<b>Total (all wholesale portfolios)</b>					28	48,086		6,145			9,508	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD net of CRM weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

**CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q1 2019						
						EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
						a	b	c	d	e	f	g
<b>Corporate</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	13,808	0.05%	2,802	25.81%	0.95	1,216	8.81%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	1,484	0.19%	470	36.40%	1.72	480	32.35%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	2,473	0.32%	489	37.42%	1.81	1,152	46.58%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	1,562	0.61%	472	32.16%	1.64	824	52.75%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	1,362	1.42%	649	31.40%	1.51	1,015	74.52%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	254	3.01%	219	39.76%	2.64	312	122.83%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	7	13.15%	15	23.90%	1.24	7	100.00%
Default	Default	100.00 (Default)	C	C to D	8	-	100.00%	4	45.00%	2.74	-	0.00%
Sub-total					9	20,950		5,120			5,006	
<b>Sovereign</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	9,300	0.04%	214	12.34%	2.57	422	4.54%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	43	0.20%	5	11.00%	1.63	4	9.30%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	82	0.32%	6	29.80%	0.50	21	25.61%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	6	0.54%	1	55.00%	1.00	4	66.67%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	6	0.91%	1	40.00%	1.00	4	66.67%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	-	0.00%	-	0.00%	0.00	-	0.00%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	17	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					18	9,437		227			455	
<b>Bank</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	19,050	0.06%	261	33.38%	0.97	2,521	13.23%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,374	0.19%	110	31.88%	1.51	375	27.29%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	221	0.32%	48	35.00%	1.11	85	38.46%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	374	0.54%	33	35.67%	0.08	139	37.17%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	4	1.24%	14	45.80%	1.08	4	100.00%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	5	2.74%	6	36.10%	0.95	5	100.00%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	26	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					27	21,028		472			3,129	
<b>Total (all wholesale portfolios)</b>					28	51,415		5,819			8,590	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD net of CRM weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

**CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q4 2018						
						EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
						a	b	c	d	e	f	g
<b>Corporate</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	9,747	0.05%	2,790	29.58%	0.99	854	8.76%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	2,074	0.19%	375	19.77%	1.16	339	16.32%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	1,169	0.32%	526	30.64%	2.05	723	61.86%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	1,103	0.66%	475	28.16%	1.33	764	69.27%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	1,328	1.43%	606	18.93%	0.94	912	68.71%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	321	2.81%	212	42.25%	0.79	356	110.99%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	23	12.96%	9	19.14%	1.00	20	87.70%
Default	Default	100.00 (Default)	C	C to D	8	0	100.00%	1	45.00%	2.99	0	533.33%
Sub-total					9	15,765		4,994			3,968	
<b>Sovereign</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	9,904	0.04%	219	6.67%	2.38	268	2.71%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	15	0.20%	5	11.57%	1.97	2	12.21%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	104	0.33%	6	39.96%	0.51	28	26.81%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	3	0.63%	1	55.00%	1.00	2	76.38%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	7	1.21%	2	40.00%	0.90	4	67.37%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	1	2.74%	2	65.00%	4.29	2	225.33%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	17	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					18	10,034		235			306	
<b>Bank</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	20,382	0.07%	253	29.25%	1.16	2,614	12.82%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	983	0.19%	85	28.33%	0.98	201	20.44%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	101	0.32%	59	22.28%	1.86	14	13.86%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	415	0.54%	28	29.17%	0.13	150	36.20%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	16	0.91%	10	54.12%	0.67	15	96.06%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	6	2.74%	7	35.00%	0.98	5	88.58%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	-	0.00%	-	0.00%	0.00	-	0.00%
Default	Default	100.00 (Default)	C	C to D	26	-	0.00%	-	0.00%	0.00	-	0.00%
Sub-total					27	21,903		442			2,999	
<b>Total (all wholesale portfolios)</b>					28	47,702		5,671			7,273	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD net of CRM weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

**CCR5 - COMPOSITION OF COLLATERAL FOR CCR EXPOSURE (1)**

		Q2 2019					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
LINE #	a	b	c	d	e	f	
(\$ millions)							
Cash – domestic currency	1	-	1,556	-	1,970	18,029	36,767
Cash – other currencies	2	-	1,798	-	1,424	74,394	75,012
Domestic sovereign debt	3	-	261	-	1,307	49,366	28,351
Other sovereign debt	4	-	35	-	298	50,976	49,369
Government agency debt	5	-	698	-	696	5,276	15,873
Corporate bonds	6	-	49	-	196	4,209	11,284
Equity securities	7	-	4	-	1,469	33,461	46,143
Other collateral	8	-	-	-	-	-	-
<b>Total</b>	<b>9</b>	-	<b>4,401</b>	-	<b>7,360</b>	<b>235,711</b>	<b>262,799</b>

**CCR5 - COMPOSITION OF COLLATERAL FOR CCR EXPOSURE (1)**

		Q1 2019					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
LINE #	a	b	c	d	e	f	
(\$ millions)							
Cash – domestic currency	1	-	1,921	-	1,510	20,198	36,045
Cash – other currencies	2	-	1,842	-	1,530	75,429	66,573
Domestic sovereign debt	3	-	305	-	786	53,207	30,672
Other sovereign debt	4	-	42	-	324	48,048	50,649
Government agency debt	5	-	619	-	423	4,003	11,685
Corporate bonds	6	-	35	-	37	7,916	19,249
Equity securities	7	-	-	-	931	29,748	45,156
Other collateral	8	-	-	-	-	1,068	-
<b>Total</b>	<b>9</b>	-	<b>4,764</b>	-	<b>5,541</b>	<b>239,617</b>	<b>260,029</b>

**CCR5 - COMPOSITION OF COLLATERAL FOR CCR EXPOSURE (1)**

		Q4 2018					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
LINE #	a	b	c	d	e	f	
(\$ millions)							
Cash – domestic currency	1	-	1,487	-	908	20,636	40,936
Cash – other currencies	2	-	3,276	-	1,261	54,761	48,215
Domestic sovereign debt	3	-	164	-	636	54,622	28,312
Other sovereign debt	4	-	108	-	345	33,739	34,079
Government agency debt	5	-	640	-	350	1,909	8,921
Corporate bonds	6	-	33	-	-	7,735	16,459
Equity securities	7	-	-	-	-	23,106	39,832
Other collateral	8	-	-	-	-	1,074	-
<b>Total</b>	<b>9</b>	-	<b>5,708</b>	-	<b>3,500</b>	<b>197,582</b>	<b>216,754</b>

(1) Segregated refers to collateral which is held in a bankruptcy-remote manner whereas unsegregated refers to collateral that is not held in bankruptcy-remote manner.

**CCR6 - CREDIT DERIVATIVES EXPOSURES (1)**

(\$ millions)	LINE #	Q2 2019		Q1 2019		Q4 2018	
		Protection bought	Protection sold	Protection bought	Protection sold	Protection bought	Protection sold
		a	b	c	d	e	f
<b>Notionals</b>							
Single-name credit default swaps	1	1,084	1	1,879	-	1,858	24
Index credit default swaps	2	7,703	5,328	4,358	1,877	1,977	797
Total return swaps	3	1,416	-	1,136	4	1,318	379
Credit options	4	-	-	-	-	-	-
Other credit derivatives	5	-	-	-	-	-	-
<b>Total notionals</b>	<b>6</b>	<b>10,203</b>	<b>5,329</b>	<b>7,373</b>	<b>1,881</b>	<b>5,153</b>	<b>1,200</b>
<b>Fair values</b>							
Positive fair value (asset)	7	23	121	30	34	33	15
Negative fair value (liability)	8	197	-	111	-	53	1

(1) Long and short positions are reported separately and are not consolidated.

**CCR8 - EXPOSURES TO CENTRAL COUNTERPARTIES (1)**

(\$ millions)

	Q2 2019		Q1 2019		Q4 2018	
	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA
	a	b	c	d	e	f
<b>1 Exposures to QCCPs (total)</b>		535		568		664
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which						
2 (i) OTC derivatives	8,907	182	8,540	174	11,327	230
3 (ii) Exchange-traded derivatives	3,010	64	3,572	74	5,547	114
4 (iii) Securities financing transactions	4,532	91	3,783	76	4,534	91
5 (iv) Netting sets where cross-product netting has been approved	1,365	27	1,185	24	1,246	25
6 Segregated initial margin	-	-	-	-	-	-
7 Non-segregated initial margin	-	-	-	-	-	-
8 Pre-funded default fund contributions	2,821	-	2,751	-	2,832	57
9 Unfunded default fund contributions	640	353	702	394	695	377
10	-	-	-	-	-	-
<b>11 Exposures to non-QCCPs (total)</b>		-		-		-
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which						
12 (i) OTC derivatives	-	-	-	-	-	-
13 (ii) Exchange-traded derivatives	-	-	-	-	-	-
14 (iii) Securities financing transactions	-	-	-	-	-	-
15 (iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-
16 Segregated initial margin	-	-	-	-	-	-
17 Non-segregated initial margin	-	-	-	-	-	-
18 Pre-funded default fund contributions	-	-	-	-	-	-
19 Unfunded default fund contributions	-	-	-	-	-	-
20	-	-	-	-	-	-

(1) Effective Q1 2019, results reflect the new capital requirements for bank exposures to central counterparties as outlined in OSFI's CAR Guideline issued October 30, 2018.

DERIVATIVE INSTRUMENTS																						
LINE #	Q2 2019				Q1 2019				Q4 2018				Q3 2018				Q2 2018					
	Notional Amount	Replacement Cost (1)	Credit risk Equivalent (1)	Risk-weighted Assets (2)	Notional Amount	Replacement Cost (1)	Credit risk Equivalent (1)	Risk-weighted Assets (2)	Notional Amount	Replacement Cost	Credit risk Equivalent	Risk-weighted Assets	Notional Amount	Replacement Cost	Credit risk Equivalent	Risk-weighted Assets	Notional Amount	Replacement Cost	Credit risk Equivalent	Risk-weighted Assets		
(\$ millions)																						
<b>Interest Rate Contracts</b>																						
Over-the-counter																						
Swaps (3)	1	4,198,293	2,733	7,454	1,503	3,956,228	2,760	7,652	1,358	3,831,997	8,514	10,699		3,555,230	8,236	10,970		3,368,967	7,966	11,224		
Forward rate agreements	2	497,011	60	900	172	566,076	373	1,227	215	411,573	36	34		297,845	24	24		416,430	28	27		
Purchased options	3	44,538	12	66	28	35,812	1	68	34	35,023	409	393		28,684	434	331		27,640	455	330		
Written options	4	33,615	41	185	104	44,529	29	176	96	48,721	-	-		39,650	-	-		36,913	-	-		
	5	4,773,457	2,846	8,605	1,807	4,602,645	3,163	9,123	1,703	4,327,314	8,959	11,126	704	3,921,409	8,694	11,325	669	3,849,950	8,449	11,581	1,267	
Exchange traded																						
Futures	6	212,056	181	311	6	179,167	32	97	2	192,482	-	-		142,641	-	-		120,183	-	-		
Purchased options	7	9,725	4	8	-	12,530	13	24	1	26,629	-	-		15,405	-	-		21,099	-	-		
Written options	8	8,558	4	7	-	10,771	3	7	-	16,511	-	-		17,355	-	-		15,378	-	-		
	9	230,339	189	326	6	202,468	48	128	3	235,622	-	-		175,401	-	-		156,660	-	-		
<b>Total Interest Rate Contracts</b>	10	5,003,796	3,035	8,931	1,813	4,805,113	3,211	9,251	1,706	4,562,936	8,959	11,126	704	4,096,810	8,694	11,325	669	4,006,610	8,449	11,581	1,267	
<b>Foreign Exchange Contracts</b>																						
Over-the-counter																						
Cross-currency swaps	11	594,386	1,454	6,555	1,087	570,412	1,257	6,482	1,134	548,148	8,305	22,741		532,287	8,747	22,789		506,512	10,338	24,101		
Forward foreign exchange contracts	12	443,439	1,644	7,273	1,248	412,838	1,807	6,729	1,100	472,323	4,453	8,373		450,962	3,661	6,818		485,881	3,831	7,978		
Purchased options	13	33,466	51	177	55	27,893	42	159	46	21,468	225	424		25,626	233	476		26,952	213	437		
Written options	14	31,325	11	100	29	32,308	6	84	25	24,018	-	-		28,138	-	-		31,674	-	-		
	15	1,102,616	3,160	14,105	2,419	1,043,451	3,112	13,454	2,305	1,065,957	12,983	31,538	2,544	1,037,013	12,641	30,083	2,302	1,051,019	14,382	32,516	2,618	
Exchange traded																						
Futures	16	578	1	2	-	607	4	9	-	739	-	-		963	-	-		1,080	-	-		
Purchased options	17	2,401	7	14	-	3,516	17	32	1	2,625	-	-		2,493	-	-		4,182	-	-		
Written options	18	1,834	2	4	-	2,089	3	6	-	1,420	-	-		1,089	-	-		1,744	-	-		
	19	4,813	10	20	-	6,212	24	47	1	4,784	-	-		4,545	-	-		7,006	-	-		
<b>Total Foreign Exchange Contracts</b>	20	1,107,429	3,170	14,125	2,419	1,049,663	3,136	13,501	2,306	1,070,741	12,983	31,538	2,544	1,041,558	12,641	30,083	2,302	1,058,025	14,382	32,516	2,618	
<b>Commodity Contracts</b>																						
Over-the-counter																						
Swaps	21	25,610	691	3,193	992	22,692	575	2,618	741	24,366	1,559	4,450		22,340	1,630	4,304		20,424	1,701	4,106		
Purchased options	22	6,969	68	496	131	6,098	32	327	85	6,182	335	1,108		6,143	434	1,185		6,551	496	1,279		
Written options	23	4,359	20	211	50	3,854	6	162	33	4,233	-	-		4,446	-	-		4,655	-	-		
	24	36,938	779	3,900	1,173	32,644	613	3,107	859	34,781	1,894	5,558	1,188	32,929	2,064	5,489	1,136	31,630	2,197	5,385	1,127	
Exchange traded																						
Futures	25	33,628	838	1,781	36	30,999	728	1,511	30	33,104	-	-		31,279	-	-		29,068	-	-		
Purchased options	26	2,562	49	98	2	2,434	123	191	4	3,303	-	-		3,753	-	-		4,284	-	-		
Written options	27	4,938	77	160	3	4,369	46	97	2	4,909	-	-		5,143	-	-		5,872	-	-		
	28	41,128	964	2,039	41	37,802	897	1,799	36	41,316	-	-		40,175	-	-		39,224	-	-		
<b>Total Commodity Contracts</b>	29	78,066	1,743	5,939	1,214	70,446	1,510	4,906	895	76,097	1,894	5,558	1,188	73,104	2,064	5,489	1,136	70,854	2,197	5,385	1,127	
<b>Equity Contracts</b>																						
Over-the-counter																						
Swaps	30	59,819	336	5,062	1,402	46,765	256	4,712	1,351	53,107	1,585	4,332		50,793	840	3,431		61,835	1,040	4,263		
Exchange traded	31	32,684	982	2,147	43	29,194	715	1,808	36	33,687	-	-		31,580	-	-		28,793	-	-		
<b>Total Equity Contracts</b>	32	92,503	1,318	7,209	1,445	75,959	971	6,520	1,387	86,794	1,585	4,332	431	82,373	840	3,431	442	90,628	1,040	4,263	545	
<b>Credit Default Swaps (4)</b>																						
Over-the-counter	33	7,741	123	278	91	4,508	85	238	83	3,490	10	55		83	2,430	5	55		63	2,548	5	55
Sub-total	34	6,289,535	9,389	36,482	6,982	6,005,689	8,913	34,416	6,377	5,800,058	25,431	52,609	4,950	5,296,275	24,244	50,383	4,612	5,228,665	26,073	53,800	5,595	
Impact of master netting agreements	35	n.a.	-	-	-	n.a.	-	-	-	n.a.	(15,575)	(29,170)		n.a.	(15,454)	(28,614)		n.a.	(17,130)	(31,371)		
<b>Total</b>	36	6,289,535	9,389	36,482	6,982	6,005,689	8,913	34,416	6,377	5,800,058	9,856	23,439	4,950	5,296,275	8,790	21,769	4,612	5,228,665	8,943	22,429	5,595	

(1) Effective Q1 2019, Replacement Cost and Credit Risk Equivalent are presented after the impact of master netting agreements and calculated using the SA-CCR in accordance with the CAR Guideline issued by OSFI on October 30, 2018. Prior periods have not been restated.

(2) Effective Q1 2019, results reflect the new capital requirements for bank exposures to central clearing counterparties in OSFI's CAR Guideline issued October 30, 2018.

(3) Risk-weighted assets are reported after the impact of master netting agreements and application of scaling factor where applicable.

(4) Interest Rate Contracts includes Interest Rate Total Return Swaps.

(5) Long and short positions are reported consolidated.



**SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1)**

(\$ millions)		Q2 2019								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	e	f	g	i	j	k
1	<b>Total retail, of which:</b>	3,602	-	3,602	10,555	-	10,555	-	-	-
2	Residential mortgage (2)	975	-	975	2,791	-	2,791	-	-	-
3	Credit card	2,153	-	2,153	965	-	965	-	-	-
4	Other retail exposures	474	-	474	6,799	-	6,799	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	<b>Total wholesale, of which:</b>	50	5,579	5,629	6,170	-	6,170	8	-	8
7	Loans to corporates	50	5,579	5,629	211	-	211	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	-	-	-
9	Lease and receivables	-	-	-	5,468	-	5,468	-	-	-
10	Other wholesale	-	-	-	491	-	491	8	-	8
11	Re-securitization	-	-	-	-	-	-	-	-	-

**SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1)**

(\$ millions)		Q1 2019								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	e	f	g	i	j	k
1	<b>Total retail, of which:</b>	4,225	-	4,225	10,239	-	10,239	-	-	-
2	Residential mortgage (2)	1,024	-	1,024	2,324	-	2,324	-	-	-
3	Credit card	2,204	-	2,204	729	-	729	-	-	-
4	Other retail exposures	997	-	997	7,186	-	7,186	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	<b>Total wholesale, of which:</b>	49	5,786	5,835	6,127	-	6,127	8	-	8
7	Loans to corporates	49	5,786	5,835	207	-	207	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	-	-	-
9	Lease and receivables	-	-	-	5,432	-	5,432	-	-	-
10	Other wholesale	-	-	-	488	-	488	8	-	8
11	Re-securitization	-	-	-	-	-	-	-	-	-

**SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1)**

(\$ millions)		Q4 2018								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	e	f	g	i	j	k
1	<b>Total retail, of which:</b>	4,110	-	4,110	10,298	-	10,298	-	-	-
2	Residential mortgage (2)	1,079	-	1,079	2,803	-	2,803	-	-	-
3	Credit card	1,873	-	1,873	731	-	731	-	-	-
4	Other retail exposures	1,158	-	1,158	6,764	-	6,764	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	<b>Total wholesale, of which:</b>	49	4,417	4,466	6,273	-	6,273	8	-	8
7	Loans to corporates	49	4,417	4,466	207	-	207	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	-	-	-
9	Lease and receivables	-	-	-	5,578	-	5,578	-	-	-
10	Other wholesale	-	-	-	488	-	488	8	-	8
11	Re-securitization	-	-	-	-	-	-	-	-	-

- (1) The amounts disclosed represent the carrying value of securitization exposures in the banking book, including securitization exposures where the criteria for recognition of risk transference are not met. As at April 30, 2019, \$379 million (\$978 million at January 31, 2019 and \$1,106 million at October 31, 2018) of securitization exposures did not qualify for risk transference. The table excludes securitization-related assets of \$8,384 million at April 30, 2019 (\$6,542 million at January 31, 2019 and \$5,977 million at October 31, 2018) that are not subject to capital requirements but consolidated on the balance sheet for accounting purposes.
- (2) Excludes mortgage-backed securities that do not involve the tranching of credit risk (e.g. NHA MBS) which are not considered securitizations as per OSFI's CAR Guideline, Chapter 7, Structured Credit Products.

**SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK**

(\$ millions)		Q2 2019										
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor				
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total		
		a	b	c	e	f	g	i	j	k		
1	<b>Total retail, of which:</b>	-	-	-	-	-	-	-	-	252	-	252
2	Residential mortgage	-	-	-	-	-	-	-	-	80	-	80
3	Credit card	-	-	-	-	-	-	-	-	51	-	51
4	Auto loans/leases	-	-	-	-	-	-	-	-	105	-	105
5	Student loans	-	-	-	-	-	-	-	-	14	-	14
6	Other retail exposures	-	-	-	-	-	-	-	-	2	-	2
7	Re-securitization	-	-	-	-	-	-	-	-	-	-	-
8	<b>Total wholesale, of which:</b>	-	-	-	-	-	-	-	-	140	-	140
9	Loans to corporates	-	-	-	-	-	-	-	-	-	-	-
10	Commercial mortgage	-	-	-	-	-	-	-	-	47	-	47
11	Lease and receivables	-	-	-	-	-	-	-	-	59	-	59
12	Auto floorplan	-	-	-	-	-	-	-	-	6	-	6
13	Insurance premium	-	-	-	-	-	-	-	-	-	-	-
14	Other wholesale	-	-	-	-	-	-	-	-	28	-	28
15	Re-securitization	-	-	-	-	-	-	-	-	-	-	-

**SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK**

(\$ millions)		Q1 2019										
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor				
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total		
		a	b	c	e	f	g	i	j	k		
1	<b>Total retail, of which:</b>	-	-	-	-	-	-	-	-	371	-	371
2	Residential mortgage	-	-	-	-	-	-	-	-	61	-	61
3	Credit card	-	-	-	-	-	-	-	-	83	-	83
4	Auto loans/leases	-	-	-	-	-	-	-	-	210	-	210
5	Student loans	-	-	-	-	-	-	-	-	7	-	7
6	Other retail exposures	-	-	-	-	-	-	-	-	10	-	10
7	Re-securitization	-	-	-	-	-	-	-	-	-	-	-
8	<b>Total wholesale, of which:</b>	-	-	-	-	-	-	-	-	128	-	128
9	Loans to corporates	-	-	-	-	-	-	-	-	12	-	12
10	Commercial mortgage	-	-	-	-	-	-	-	-	19	-	19
11	Lease and receivables	-	-	-	-	-	-	-	-	46	-	46
12	Auto floorplan	-	-	-	-	-	-	-	-	4	-	4
13	Insurance premium	-	-	-	-	-	-	-	-	-	-	-
14	Other wholesale	-	-	-	-	-	-	-	-	47	-	47
15	Re-securitization	-	-	-	-	-	-	-	-	-	-	-

**SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK**

(\$ millions)		Q4 2018										
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor				
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total		
		a	b	c	e	f	g	i	j	k		
1	<b>Total retail, of which:</b>	-	-	-	-	-	-	-	-	282	-	282
2	Residential mortgage	-	-	-	-	-	-	-	-	32	-	32
3	Credit card	-	-	-	-	-	-	-	-	126	-	126
4	Auto loans/leases	-	-	-	-	-	-	-	-	113	-	113
5	Student loans	-	-	-	-	-	-	-	-	10	-	10
6	Other retail exposures	-	-	-	-	-	-	-	-	1	-	1
7	Re-securitization	-	-	-	-	-	-	-	-	-	-	-
8	<b>Total wholesale, of which:</b>	-	-	-	-	-	-	-	-	87	-	87
9	Loans to corporates	-	-	-	-	-	-	-	-	15	-	15
10	Commercial mortgage	-	-	-	-	-	-	-	-	-	-	-
11	Lease and receivables	-	-	-	-	-	-	-	-	35	-	35
12	Auto floorplan	-	-	-	-	-	-	-	-	24	-	24
13	Insurance premium	-	-	-	-	-	-	-	-	7	-	7
14	Other wholesale	-	-	-	-	-	-	-	-	6	-	6
15	Re-securitization	-	-	-	-	-	-	-	-	-	-	-

**SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1) (2)**

	Q2 2019																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	22,802	2,043	1	28	58	22,006	2,156	770	-	3,197	216	719	-	251	18	57	-
2 Traditional securitization	17,875	2,043	1	28	51	17,072	2,156	770	-	2,365	216	719	-	184	18	57	-
3 Of which securitization	17,875	2,043	1	28	51	17,072	2,156	770	-	2,365	216	719	-	184	18	57	-
4 Of which retail underlying	11,873	1,835	1	18	51	11,572	2,156	50	-	1,624	216	626	-	127	18	50	-
5 Of which wholesale	6,002	208	-	10	-	5,500	-	720	-	741	-	93	-	57	-	7	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	4,927	-	-	-	7	4,934	-	-	-	832	-	-	-	67	-	-	-
10 Of which securitization	4,927	-	-	-	7	4,934	-	-	-	832	-	-	-	67	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	4,927	-	-	-	7	4,934	-	-	-	832	-	-	-	67	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1) (2)**

	Q1 2019																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	22,770	1,971	19	62	6	21,888	2,207	733	-	3,696	221	336	-	255	18	27	-
2 Traditional securitization	17,644	1,971	19	58	-	16,752	2,207	733	-	2,798	221	336	-	183	18	27	-
3 Of which securitization	17,644	1,971	19	58	-	16,752	2,207	733	-	2,798	221	336	-	183	18	27	-
4 Of which retail underlying	11,900	1,592	1	23	-	11,289	2,207	20	-	1,947	221	244	-	118	18	20	-
5 Of which wholesale	5,744	379	18	35	-	5,463	-	713	-	851	-	92	-	65	-	7	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	5,126	-	-	4	6	5,136	-	-	-	898	-	-	-	72	-	-	-
10 Of which securitization	5,126	-	-	4	6	5,136	-	-	-	898	-	-	-	72	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	5,126	-	-	4	6	5,136	-	-	-	898	-	-	-	72	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)**

	Q4 2018																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	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%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	23,487	55	2	3	39	3,004	20,582	-	-	529	1,775	-	-	43	148	-	-
2 Traditional securitization	19,571	20	2	3	29	3,004	16,621	-	-	529	1,364	-	-	43	115	-	-
3 Of which securitization	19,571	20	2	3	29	3,004	16,621	-	-	529	1,364	-	-	43	115	-	-
4 Of which retail underlying	13,254	20	2	2	24	3,004	10,298	-	-	529	803	-	-	43	68	-	-
5 Of which wholesale	6,317	-	-	1	5	-	6,323	-	-	-	561	-	-	-	47	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	3,916	35	-	-	10	-	3,961	-	-	-	411	-	-	-	33	-	-
10 Of which securitization	3,916	35	-	-	10	-	3,961	-	-	-	411	-	-	-	33	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	3,916	35	-	-	10	-	3,961	-	-	-	411	-	-	-	33	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Only includes securitization exposures where the risk transference recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Effective Q1 2019, securitization capital requirements are calculated in accordance with new securitization framework in OSFI's CAR Guideline issued October 30, 2018.

(3) Exposure amounts are net of collateral.

(4) RWA before application of the KIRB cap.

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1) (2)**

(\$ millions)	Q2 2019																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
2 Traditional securitization	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
3 Of which securitization	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
4 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Of which wholesale	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1) (2)**

(\$ millions)	Q1 2019																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
2 Traditional securitization	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
3 Of which securitization	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
4 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Of which wholesale	-	-	8	-	-	-	8	-	-	-	-	-	-	-	5	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)	Q4 2018																
	Exposure values by RW bands (3)					Exposure values by regulatory approach (3)				RWA by regulatory approach (4)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	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%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	8	-	-	-	-	8	-	-	-	1	-	-	-	1	-	-	-
2 Traditional securitization	8	-	-	-	-	8	-	-	-	1	-	-	-	1	-	-	-
3 Of which securitization	8	-	-	-	-	8	-	-	-	1	-	-	-	1	-	-	-
4 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Of which wholesale	8	-	-	-	-	8	-	-	-	1	-	-	-	1	-	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Only includes securitization exposures where the risk transference recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Effective Q1 2019, securitization capital requirements are calculated in accordance with new securitization framework in OSFI's CAR Guideline issued October 30, 2018.

(3) Exposure amounts are net of collateral.

(4) RWA before application of the KIRB cap.

**MARKET RISK RISK-WEIGHTED ASSETS (RWA) MOVEMENT BY KEY DRIVERS**

(\$ millions)	LINE #	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2
<b>Market Risk RWA, beginning of quarter</b>	1	14,820	13,532	11,097	10,415	9,816
Movement in risk levels (1)	2	(1,993)	1,615	(980)	1,643	569
Model updates (2)	3	-	-	399	44	-
Methodology and policy (3)	4	(495)	(327)	(178)	(1,005)	30
Acquisition and disposals	5	-	-	3,194	-	-
Foreign exchange movement and others	6	-	-	-	-	-
<b>Market Risk RWA, end of quarter</b>	7	12,332	14,820	13,532	11,097	10,415

(1) Movement in risk levels includes changes in exposures and market movements.

(2) Model updates includes updates to risk models to reflect recent experience and changes in model scope.

(3) Methodology and policy includes methodology changes to the calculations driven by regulatory policy changes, such as new or revised regulation.

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q2 2019					
		PD (1) (2)		LGD (3) (4)		EAD (5) (6)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>							
Corporate including specialized lending	1	0.85%	0.43%	34.25%	19.60%	213	180
Corporate small and medium enterprises (SMEs)	2	1.25%	0.48%	38.51%	24.95%	123	91
Sovereign	3	0.11%	0.00%	15.78%	0.00%	-	-
Bank	4	0.33%	0.00%	14.46%	0.00%	-	-
<b>Retail</b>							
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (7) (8)	5	0.96%	0.59%	25.26%	13.87%	260	260
HELOCs (8)	6	0.52%	0.40%	34.73%	19.84%	170	161
Qualifying revolving retail (QRR)	7	1.35%	1.10%	84.20%	74.69%	479	463
Other retail (excl. SMEs)	8	5.33%	4.65%	83.96%	74.95%	317	316
Retail SMEs	9	1.28%	0.74%	95.33%	77.81%	51	44

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q1 2019					
		PD (1) (2)		LGD (3) (4)		EAD (5) (6)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>							
Corporate including specialized lending	1	0.83%	0.42%	35.03%	21.43%	264	225
Corporate small and medium enterprises (SMEs)	2	1.26%	0.49%	38.27%	21.91%	118	87
Sovereign	3	0.11%	0.00%	15.05%	0.00%	-	-
Bank	4	0.31%	0.00%	14.72%	0.00%	-	-
<b>Retail</b>							
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (7) (8)	5	0.98%	0.59%	24.59%	13.85%	244	244
HELOCs (8)	6	0.57%	0.42%	34.58%	20.18%	178	171
Qualifying revolving retail (QRR)	7	1.37%	1.12%	84.31%	75.24%	476	461
Other retail (excl. SMEs)	8	5.42%	4.97%	85.16%	79.28%	321	320
Retail SMEs	9	1.25%	0.81%	95.80%	77.96%	48	42

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q4 2018					
		PD (1) (2)		LGD (3) (4)		EAD (5) (6)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>							
Corporate including specialized lending	1	0.83%	0.44%	35.31%	19.59%	268	228
Corporate small and medium enterprises (SMEs)	2	1.26%	0.53%	38.43%	22.58%	68	65
Sovereign	3	0.11%	0.00%	14.93%	0.00%	-	-
Bank	4	0.31%	0.00%	17.30%	0.00%	-	-
<b>Retail</b>							
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (7) (8)	5	0.97%	0.64%	25.67%	14.34%	250	250
HELOCs (8)	6	0.57%	0.47%	34.60%	20.04%	190	184
Qualifying revolving retail (QRR)	7	1.30%	1.15%	84.12%	79.00%	484	468
Other retail (excl. SMEs)	8	4.97%	4.53%	84.04%	77.44%	328	328
Retail SMEs	9	1.17%	0.83%	95.86%	78.51%	47	42

(1) Wholesale PDs are based on a borrower weighted average. There have been no Bank or Sovereign defaults in the past 12 months.

(2) Retail PD is based on account weighted average.

(3) Wholesale LGDs are expressed as an exposure weighted average. The LGD figures include back-dated resolved facilities.

(4) Retail LGD is based on weighted average of LGD eligible accounts.

(5) Wholesale EAD represented predicted vs. realized comparison for defaults in the previous 12 months. Term products are not included. There have been no defaults in the Bank and Sovereign asset classes within the past 12 months.

(6) Retail EAD represents predicted vs. realized comparison for defaults in the previous 12 months.

(7) Mortgages insured by Canada Mortgage And Housing Corporation and private mortgage insurers are primarily included in Sovereign.

(8) Investor-owned mortgages are included in the Other Retail asset class.

**AIRB (Advanced Internal Ratings Based approach):** The AIRB approach is the most advanced of the range of options for determining the capital requirements for credit risk. This option allows banks to use their own internal model to measure credit risk capital requirements, subject to regulatory approval. OSFI has indicated that it expects the largest Canadian Banks to adopt the AIRB approach.

**Basel Capital Floor:** A capital floor is measured based on the Basel standardized approach for credit risk and internal model for market risk, as prescribed by OSFI in CAR.

**Capital Adequacy Requirements (CAR):** OSFI's Capital Adequacy Requirements guideline.

**Credit Conversion Factor (CCF)** converts an off balance sheet exposure to its credit exposure equivalent.

**Credit Risk Mitigation (CRM)** are techniques under the CAR that banks use to mitigate credit risk and applicable capital, including exposures collateralized by first priority claims, in whole or in part with cash or securities, a loan exposure guaranteed by a third party, or a credit derivative to offset various forms of credit risk.

**Credit valuation adjustment (CVA)** is the adjustment that a bank must add as capital charge to cover the risk of mark-to-market losses on the expected counterparty risk to OTC derivatives.

The **Current exposure method (CEM)** is a method to calculate the exposure at default for OTC derivatives when the Internal Models Method (IMM) is not used.

**Drawn:** The amount of funds invested or advanced to a customer.

**Exposure at Default (EAD):** EAD for on-balance sheet amounts represents outstandings, grossed up by provisions for credit losses on impaired loans and write-offs. EAD for undrawn and other off-balance sheet are estimated using CCFs.

**Exposure at Default OTC Derivatives:** Represent the net gross positive replacement costs plus the potential credit exposure amount.

**HELOCs:** Home Equity Lines of Credit comprise lines of credit secured by equity in a residential property.

**OSFI:** Office of the Superintendent of Financial Institutions.

**Pillar 3:** OSFI prescribed regulatory disclosures to promote market discipline.

**Qualifying central counterparty (QCCP)** is an entity that is licensed to operate as a central counterparty (CCP) and is permitted by the appropriate regulator/overseer to operate as such with respect to the products offered.

**RWA Density** is the ratio of  $\Sigma$  risk weighted assets / (total exposures post CCF and post CRM). It provides a synthetic metric on riskiness of each portfolio.

**SA-CCR** is the Standardized Approach for Counterparty Credit Risk. Effective Q1 2019, SA-CCR replaces CEM as the methodology to calculate exposure at default for OTC derivatives when the Internal Models Method (IMM) is not used.

**Scaling Factor:** Regulatory requirement of an incremental multiplier of 1.06 applied to AIRB credit risk RWA.

**Securities Financing Transactions (SFT):** transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and wholesale margin lending transactions.

**Standardized Approach:** This approach allows banks to measure capital requirements by multiplying exposures by defined percentages based on the exposures product type and external credit rating (if applicable).

**Value at risk (VaR)** is a measure of how much a set of investments might lose (with a given probability), given normal market conditions, in a set time period.