



SUPPLEMENTARY REGULATORY CAPITAL DISCLOSURE

THIRD QUARTER 2018

(unaudited)

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This document is available via the Bank's web site: www.nbc.ca



Notes to users

- 1) This Supplementary Regulatory Capital Disclosure document is unaudited and should be read in conjunction with the 2017 Annual Report. All amounts are in millions of Canadian dollars unless otherwise stated.
- 2) Financial information is available through the Report to Shareholders for all quarters of 2018 and also in the document entitled *Supplementary Financial Information* which is available on the Bank's website at nbc.ca.



Table of Contents

Pillar III and Regulatory Capital Disclosure

Regulatory Capital and Capital Ratios under Basel III	pages 4-5
Leverage Ratio under Basel III	page 6
Reconciliation Between Financial Accounting and Regulatory Capital Balance Sheets	page 7
Capital Adequacy Under Basel III	page 8
Risk-Weighted Assets Movement by Key Drivers	page 9
Reconciliation of Balance Sheet with Credit Risk Exposures	page 10
Standardized Credit Risk Exposure Under the Basel Asset Categories and by Risk Weight	page 11
Maximum Credit Risk Exposure Under the Basel Asset Categories	pages 12
Credit Quality of AIRB Exposure - Retail Portfolios	pages 13-14
AIRB Credit Risk Exposures: Non-retail Portfolios	pages 15-16
AIRB Credit Risk Exposure - Back-Testing	page 17
Distribution of Gross Credit Exposure (Non-Retail Portfolio by Industries)	page 18
Gross Credit Risk Exposure at Default in Europe	page 19
Formation of Gross Impaired Loans	page 20
Gross Credit Exposure by Residual Contractual Maturity	page 21
Credit Risk Mitigation - Guarantees and Credit Derivatives	page 22
Banking Book Equity	page 23
Credit Derivative Positions (notional amounts)	page 24
Derivatives Financial Instruments According to Basel Definition	page 25
Over The Counter Derivatives Financial Instruments Settled by Central Counterparties	page 26
Aggregate Amount of Securitization Exposures	page 27
Capital Requirements for Securitization Exposures Under Securitization Framework	page 28
Asset Securitization - Managed Loans	page 29
Glossary	page 30



Regulatory Capital and Capital Ratios under Basel III⁽¹⁾

		Reference ⁽²⁾	2018			2017			
			Q3	Q2	Q1	Q4	Q3	Q2	Q1
(unaudited) (millions of Canadian dollars)			All-in basis						
Common Equity Tier 1 capital: instruments and reserves									
1	Directly issued qualifying common share capital plus related contributed surplus ⁽³⁾	a + a'	2 878	2 920	2 913	2 826	2 874	2 850	2 820
2	Retained earnings	b	8 404	8 018	7 785	7 706	7 540	7 164	7 065
3	Accumulated other comprehensive income and other reserves	c	159	139	110	168	122	221	173
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	d	10	10	8	8	7	7	7
6	Common Equity Tier 1 capital before regulatory adjustments		11 451	11 087	10 816	10 708	10 543	10 242	10 065
Regulatory adjustments to Common Equity Tier 1 capital									
8	Goodwill (net of related tax liability)	e	1 668	1 671	1 662	1 668	1 660	1 677	1 662
9	Intangible assets other than mortgage-servicing rights	f - x	1 099	1 100	1 073	1 067	1 032	1 016	997
11	Accumulated other comprehensive income related to cash flow hedges	h	138	137	152	146	136	91	131
12	Shortfall of total provisions to expected losses	i	-	-	-	-	-	-	-
14	Gains (losses) due to changes in own credit risk on fair valued liabilities	j	(39)	(62)	(81)	(39)	(32)	(25)	(17)
15	Defined benefit pension plan assets (net of related tax liability)	k - y	93	4	3	4	14	7	18
16	Investments in own shares (if not already netted off contributed surplus on reported balance sheet)		3	1	5	6	-	6	6
22	Amount exceeding the 15% threshold								
23	of which: significant investments in the common stock of financials	n	-	-	-	-	-	-	-
25	of which: deferred tax assets arising from temporary differences	o	-	-	-	-	-	-	-
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI (including regulatory adjustments in respect of own use property)		-	-	-	-	-	-	-
28	Total regulatory adjustments to Common equity Tier 1		2 962	2 851	2 814	2 852	2 810	2 772	2 797
29	Common Equity Tier 1 capital (CET1)		8 489	8 236	8 002	7 856	7 733	7 470	7 268
Additional Tier 1 capital: instruments									
30	Directly issued qualifying Additional Tier 1 instruments plus related contributed surplus ⁽³⁾	v	2 450	2 150	2 150	1 850	1 850	1 450	1 450
31	of which: classified as equity under applicable accounting standards	v + z	2 450	2 150	2 150	1 850	1 850	1 450	1 450
32	of which: classified as liabilities under applicable accounting standards	p	-	-	-	-	-	-	-
33	Directly issued capital instruments subject to phase out from Additional Tier 1 ⁽³⁾⁽⁴⁾	p' + v'	350	750	750	750	950	950	950
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)	q	2	2	2	2	2	2	1
36	Additional Tier 1 capital before regulatory adjustments		2 802	2 902	2 902	2 602	2 802	2 402	2 401
Additional Tier 1 capital: regulatory adjustments									
41	Other deductions from Tier 1 capital as determined by OSFI		1	1	1	1	1	1	1
41a	of which: Reverse mortgages		1	1	1	1	1	1	1
43	Total regulatory adjustments to Additional Tier 1 capital		1	1	1	1	1	1	1
44	Additional Tier 1 capital (AT1)		2 801	2 901	2 901	2 601	2 801	2 401	2 400
45	Tier 1 capital (T1 = CET1 + AT1)		11 290	11 137	10 903	10 457	10 534	9 871	9 668
Tier 2 capital: instruments and provisions									
46	Directly issued qualifying Tier 2 instruments plus related contributed surplus ⁽³⁾	r	750	750	-	-	-	-	-
47	Directly issued capital instruments subject to phase out from Tier 2 ⁽³⁾	r'	9	9	8	9	9	10	1 009
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	s	3	3	2	2	2	2	2
50	Allowances for credit losses	t	155	164	154	193	210	204	234
51	Tier 2 capital before regulatory adjustments		917	926	164	204	221	216	1 245
Tier 2 capital: regulatory adjustments									
57	Total regulatory adjustments to Tier 2 capital		-	-	-	-	-	-	-
58	Tier 2 capital (T2)		917	926	164	204	221	216	1 245
59	Total capital (TC = T1 + T2)		12 207	12 063	11 067	10 661	10 755	10 087	10 913

(1) As requested by the Office of the Superintendent of Financial Institutions (Canada) (OSFI), all the Domestic Systemically Important Banks (D-SIBs) in Canada must fully apply the Basel III deductions and must disclose the all-in-ratios.

(2) Reconciliation with Balance Sheet is presented on page 7.

(3) A complete list of capital instruments and their main features is now available on the Bank's website at nbc.ca under *Investor Relations > Capital & Debt Information > Main Features of Regulatory Capital Instruments*.

(4) Figures as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.



Regulatory Capital and Capital Ratios under Basel III⁽¹⁾ (continued)

		2018			2017			
		Q3	Q2	Q1	Q4	Q3	Q2	Q1
(unaudited) (millions of Canadian dollars)		All-in basis						
60a	Common Equity Tier 1 Capital RWA (CET1)	73 268	72 834	71 179	70 173	69 156	69 383	68 574
60b	Tier 1 Capital RWA	73 300	72 865	71 271	70 327	69 289	69 533	68 715
60c	Total capital RWA	73 331	72 895	71 362	70 451	69 396	69 653	68 828
Capital ratios								
61	Common Equity Tier 1 (as a percentage of risk weighted assets)	11,6%	11,3%	11,2%	11,2%	11,2%	10,8%	10,6%
62	Tier 1 (as a percentage of risk weighted assets) ⁽²⁾	15,4%	15,3%	15,3%	14,9%	15,2%	14,2%	14,1%
63	Total capital (as a percentage of risk weighted assets) ⁽²⁾	16,7%	16,6%	15,5%	15,1%	15,5%	14,5%	15,9%
64	Institution-specific buffer requirement (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer requirement plus D-SIB buffer requirement expressed as a percentage of risk weighted assets)	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%
67	of which: G-SIB buffer requirement	na	na	na	na	na	na	na
67a	of which: D-SIBs buffer requirement	1,0%	1,0%	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)	11,6%	11,3%	11,2%	11,2%	11,2%	10,8%	10,6%
OSFI all-in target⁽³⁾								
69	Common Equity Tier 1 all-in target ratio	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%
70	Tier 1 capital all-in target ratio	9,5%	9,5%	9,5%	9,5%	9,5%	9,5%	9,5%
71	Total capital all-in target ratio	11,5%	11,5%	11,5%	11,5%	11,5%	11,5%	11,5%
Amounts below the thresholds for deduction (before risk weighting)								
72	Non-significant investments in the capital of other financial institutions	366	481	658	466	459	317	232
73	Significant investments in the common stock of financial institutions	255	241	235	221	237	238	257
75	Deferred tax assets arising from temporary differences (net of related tax liabilities)	43	58	50	54	31	61	22
Applicable caps on the inclusion of allowances in Tier 2								
76	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	66	68	61	59	60	55	58
77	Cap on inclusion of allowances in Tier 2 under standardised approach	89	90	83	79	77	72	72
78	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	89	96	93	134	150	149	175
79	Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	307	308	310	309	304	312	301
Capital instruments subject to phase-out arrangements (only applicable between Jan 1, 2018 and Jan 1, 2022)								
82	Current cap on AT1 instruments subject to phase out arrangements	775	775	775	968	968	968	968
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	-	-	-	-	-	-
84	Current cap on T2 instruments subject to phase out arrangements	953	953	953	1 191	1 191	1 191	1 191
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	-	-	-	-	-	-
Transitional Capital Disclosure Template⁽⁴⁾								
					Transitional basis			
29	Common Equity Tier 1 capital (CET1)				8 404	8 284	8 009	7 809
45	Tier 1 capital (T1 = CET1 + AT1)				10 668	10 741	10 074	9 876
59	Total capital (TC = T1 + T2)				10 872	10 961	10 289	11 120
60	Total risk weighted assets				71 254	71 481	70 428	69 567
61	Common Equity Tier 1 (as a percentage of risk weighted assets)				11,8%	11,6%	11,4%	11,2%
62	Tier 1 (as a percentage of risk weighted assets) ⁽²⁾				15,0%	15,0%	14,3%	14,2%
63	Total capital (as a percentage of risk weighted assets) ⁽²⁾				15,3%	15,3%	14,6%	16,0%

(1) As requested by the Office of the Superintendent of Financial Institutions (Canada) (OSFI), all the Domestic Systemically Important Banks (D-SIBs) in Canada must fully apply the Basel III deductions and must disclose the all-in-ratios.

(2) Ratios as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.

(3) Include the conservation buffer and the surcharge applicable to D-SIBs but do not include the domestic stability buffer.

(4) Per CAR guidelines, transitional basis capital and ratios are not applicable subsequent to Q4 2017.

Leverage Ratio under Basel III

(unaudited) (millions of Canadian dollars)

	2018			2017			
	Q3	Q2	Q1 ⁽¹⁾	Q4	Q3	Q2	Q1
Accounting assets vs. leverage ratio exposure	All-in basis			Transitional basis			
1 Total consolidated assets as per published financial statements	257 637	256 259	251 065	245 827	240 072	239 020	234 119
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(33)	(58)	(68)	(80)	(68)	(90)	(60)
3 Adjustment for fiduciary assets recognised on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	–	–	–	–	–	–	–
4 Adjustment for derivative financial instruments ⁽²⁾	2 939	3 090	3 635	(381)	519	2 280	1 621
5 Adjustment for securities financing transactions ⁽²⁾	3 062	2 516	(487)	1 714	2 086	3 408	3 062
6 Adjustment for off balance-sheet items	21 492	21 796	20 713	20 183	22 407	22 644	22 048
7 Other adjustments	(4 401)	(4 777)	(5 299)	(4 508)	(4 489)	(4 676)	(3 950)
8 Leverage Ratio Exposure	280 696	278 826	269 559	262 755	260 527	262 586	256 840

	All-in basis			Transitional basis			
Leverage ratio common disclosure							
On-balance sheet exposures							
1 On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	232 327	228 798	223 550	214 702	211 909	210 621	208 226
2 (Asset amounts deducted in determining Basel III Tier 1 capital)	(3 003)	(2 914)	(2 897)	(2 676)	(2 634)	(2 592)	(2 304)
3 Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of lines 1 and 2)	229 324	225 884	220 653	212 026	209 275	208 029	205 922
Derivative exposures							
4 Replacement cost associated with all derivative transactions (i.e., net of eligible cash variation margin)	4 034	4 270	3 991	1 277	3 551	3 974	4 405
5 Add-on amounts for PFE associated with all derivative transactions	6 502	6 725	8 166	6 766	6 597	7 044	6 624
6 Gross up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	–	–	–	–	–	–	–
7 (Deductions of receivables assets for cash variation margin provided in derivative transactions)	–	–	–	–	–	–	–
8 (Exempted CCP-leg of client cleared trade exposures)	–	–	–	–	–	–	–
9 Adjusted effective notional amount of written credit derivatives	29	–	4	–	12	7	–
10 (Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–	–	–	–	–	–	–
11 Total derivative exposures (sum of lines 4 to 10)	10 565	10 995	12 161	8 043	10 160	11 025	11 029
Securities financing transaction exposures							
12 Gross SFT assets recognised for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	16 253	17 636	16 520	20 789	16 600	17 481	14 779
13 (Netted amounts of cash payables and cash receivables of gross SFT assets)	(1 127)	(2 196)	(4 637)	(1 275)	(1 211)	(583)	(815)
14 Counterparty credit risk (CCR) exposure for SFTs	4 189	4 712	4 149	2 989	3 296	3 990	3 877
15 Agent transaction exposures	–	–	–	–	–	–	–
16 Total securities financing transaction exposures (sum of lines 12 to 15)	19 315	20 152	16 032	22 503	18 685	20 888	17 841
Other off-balance sheet exposures							
17 Off-balance sheet exposure at gross notional amount	68 195	68 811	66 194	64 167	62 996	63 451	61 284
18 (Adjustments for conversion to credit equivalent amounts)	(46 703)	(47 016)	(45 481)	(43 984)	(40 589)	(40 807)	(39 236)
19 Off-balance sheet items (sum of lines 17 and 18)	21 492	21 795	20 713	20 183	22 407	22 644	22 048
Capital and Total Exposures							
20 Tier 1 capital⁽³⁾	11 290	11 137	10 903	10 668	10 741	10 074	9 876
21 Total Exposures (sum of lines 3, 11, 16 and 19)	280 696	278 826	269 559	262 755	260 527	262 586	256 840
Leverage Ratio							
22 Basel III leverage ratio	4,0%	4,0%	4,0%	4,1%	4,1%	3,8%	3,8%
Leverage ratio – All-in basis	4,0%	4,0%	4,0%	4,0%	4,0%	3,8%	3,8%

(1) Prior to Q1 2018, the leverage ratio is calculated on a transitional basis.

(2) Adjustments due to differences between accounting and regulatory netting standards.

(3) Figures as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.



Reconciliation between Financial Accounting and Regulatory Capital Balance Sheets ⁽¹⁾

(unaudited) (millions of Canadian dollars)	Q3 2018				
	Cross - Reference to Definition of Capital ⁽²⁾	As In Report to Shareholders	Deconsolidation of Insurance ⁽³⁾ and other entities ⁽⁴⁾	Under regulatory scope of consolidation	Of which
Assets					
Cash and deposits with financial institutions		11 037	-	11 037	
Securities		73 369	11 001	84 370	
Assets purchased under reverse repurchase agreements and securities borrowed		16 253	-	16 253	
Loans					
Residential mortgage		52 731	(25 062)	27 669	
Personal		36 459	-	36 459	
Credit card		2 285	(1 389)	896	
Business and government		45 358	-	45 358	
Customers' liability under acceptances		6 661	-	6 661	
Less: Allowances for credit losses		(658)	-	(658)	
Allowances reflected in Tier 2 regulatory capital	t				(155)
Shortfall of allowances to expected loss	l				-
Allowances reflected in regulatory capital					(503)
Other assets					
Derivative financial instruments		7 625	-	7 625	
Other		6 517	(53)	6 464	
Goodwill	e				1 668
Intangibles assets	f				1 271
Deferred tax assets					514
Deferred tax assets excluding those arising from temporary differences	g				-
Deferred tax assets arising from temporary differences exceeding regulatory thresholds	o				-
Deferred tax assets - realize through loss carrybacks					471
Deferred tax assets - other temporary differences					43
Defined-benefit pension fund net assets	k				127
Significant Investments in other financial institutions					255
Significant investments exceeding regulatory thresholds	m + n				-
Significant investments not exceeding regulatory thresholds					255
Other					2 629
Total assets		257 637	(15 503)	242 134	
Liabilities					
Deposits		166 595	-	166 595	
Derivatives financial instruments		5 702	-	5 702	
Other liabilities		70 333	(15 503)	54 830	
Gains and losses due to changes in own credit risk on fair value liabilities	j				(39)
Deferred tax liabilities					166
Related to goodwill	w				-
Related to intangibles	x				172
Related to pensions	y				34
Other deferred tax liabilities					(40)
Other					54 703
Subordinated debt		753	-	753	
Regulatory capital amortization of maturing debentures					-
Fair value adjustment and unamortized issuance cost					(6)
Subordinated debentures used for regulatory capital					759
Allowed for inclusion in Tier 2 capital	r				759
Subject to phase out	r'				9
Ineligible additional Tier 2 capital					-
Excluded from Tier 2 capital due to cap					-
Total liabilities		243 383	(15 503)	227 880	
Equity Attributable to Shareholders		13 891	-	13 891	
Common shares	a				2 825
Contributed surplus	a'				53
Retained Earnings	b				8 404
Accumulated Other Comprehensive Income (loss)	c				159
Net gains (losses) on instruments designated as cash flow hedges	h				138
Other					21
Preferred shares					2 450
Allowed for inclusion in additional Tier 1 capital	v				2 450
Subject to phase out	v'				-
Ineligible additional Tier 1 capital					-
Excluded from additional Tier 1 capital due to cap					-
Non-controlling interests		363	4	367	
Innovative Instruments					352
Allowed for inclusion in additional Tier 1 capital					-
Subject to phase out	p'				350
Excluded from additional Tier 1 capital due to cap					-
Other					2
Portion allowed for inclusion into CET1	d				10
Portion allowed for inclusion into Tier 1 capital	q				2
Portion allowed for inclusion into Tier 2 capital	s				3
Portion not allowed for regulatory capital					3
Total Equity		14 254	4	14 258	
Total Liabilities and Equity		257 637	(15 499)	242 138	

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2017 Annual Report audited consolidated financial statements, may differ from regulatory purposes.

The regulatory consolidation does not include structured entities, where significant risk has been transferred to third parties nor subsidiaries and associates engaged in insurance activities.

(2) The references identify balance sheet components which are used in calculation of regulatory capital on page 4.

(3) Total assets related to Insurance activities and National Bank Life Insurance Company, and other are \$160 million and \$16 million respectively.

(4) The amount is mainly due to securitization entities. For more information on structured entities, please see pages 187 to 189 of the 2017 Annual Report.



Capital Adequacy under Basel III⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018						2017					
	Exposure at default	Q3				Capital requirement ⁽²⁾	Q2	Q1	Q4	Q3	Q2	Q1
		Standardized	AIRB Approach	Other	Total							
Credit risk												
Retail												
Residential mortgages	53 188	1 497	4 719	–	6 216	497	6 051	6 075	5 555	5 638	5 472	5 392
Qualifying revolving retail	6 283	–	1 340	–	1 340	107	1 313	1 195	1 275	1 210	1 190	1 155
Other retail	16 518	2 022	5 117	–	7 139	571	7 264	7 194	7 611	7 559	7 601	7 280
Non-retail												
Corporate	69 423	1 914	28 279	–	30 193	2 415	29 963	28 533	27 544	26 969	27 810	27 226
Sovereign	31 276	375	647	–	1 022	82	1 009	988	985	1 011	891	857
Financial institutions	5 189	585	954	–	1 539	123	1 502	1 444	1 531	1 531	1 639	1 473
Banking book equity ⁽³⁾	977	–	977	–	977	78	977	912	910	932	872	886
Securitization	4 791	–	393	–	393	31	409	408	390	423	402	304
Other assets	25 990	–	–	2 962	2 962	237	2 967	2 826	3 645	3 455	3 232	3 137
Counterparty credit risk												
Corporate	19 292	136	218	–	354	28	389	279	197	156	238	209
Sovereign	40 674	–	61	–	61	5	84	57	43	50	32	33
Financial institutions	65 909	–	359	–	359	29	717	394	366	508	510	436
Trading portfolio	8 247	68	1 821	–	1 889	151	2 208	2 246	2 178	2 151	2 183	2 190
Credit valuation adjustment charge ⁽⁴⁾		837	–	–	837	67	813	2 449	2 227	1 916	2 159	2 030
Regulatory scaling factor		–	2 693	–	2 693	215	2 711	2 625	2 580	2 557	2 624	2 540
Total - Credit risk	347 757	7 434	47 578	2 962	57 974	4 636	58 377	57 625	57 037	56 066	56 855	55 148
Market risk												
VaR		–	1 158	–	1 158	93	1 028	766	867	972	962	1 340
Stressed VaR		–	2 382	–	2 382	191	2 209	1 388	1 324	1 630	1 086	1 632
Interest-rate specific risk		1 215	–	–	1 215	97	818	1 182	906	661	720	843
Total - Market risk		1 215	3 540	–	4 755	381	4 055	3 336	3 097	3 263	2 768	3 815
Operational risk		10 539	–	–	10 539	843	10 402	10 218	10 039	9 827	9 760	9 611
Total	347 757	19 188	51 118	2 962	73 268	5 860	72 834	71 179	70 173	69 156	69 383	68 574
Capital ratio under Basel III												
Common Equity Tier 1 (CET1)					11,6%		11,3%	11,2%	11,2%	11,2%	10,8%	10,6%
Tier 1 ⁽⁵⁾					15,4%		15,3%	15,3%	14,9%	15,2%	14,2%	14,1%
Total ⁽⁵⁾					16,7%		16,6%	15,5%	15,1%	15,5%	14,5%	15,9%
Leverage ratio under Basel III					4,0%		4,0%	4,0%	4,0%	4,0%	3,8%	3,8%

(1) Figures are presented in an "all-in" basis.

(2) The capital requirement is equal to 8% of risk-weighted assets.

(3) Calculated using the simple risk-weight method.

(4) Calculated based on CET1 risk-weighted assets.

(5) Ratios as at October 31, 2017 include the redemption of the Series 28 preferred shares on November 15, 2017.



Risk-Weighted Assets Movement by Key Drivers⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018					2017			
	Q3			Q2	Q1	Q4	Q3	Q2	Q1
	Non-counterparty credit risk	Counterparty credit risk ⁽²⁾	Total	Total	Total	Total	Total	Total	Total
Credit risk – Risk-weighted assets at beginning	54 166	4 211	58 377	57 625	57 037	56 066	56 855	55 148	55 903
Book size	223	(709)	(486)	1 974	1 289	833	453	889	455
Book quality	(49)	(21)	(70)	(1 681)	(143)	141	(143)	176	(832)
Model updates	–	–	–	(74)	–	(426)	–	–	–
Methodology and policy	–	–	–	–	–	–	–	–	–
Acquisitions and disposals	–	–	–	–	–	–	–	–	–
Foreign exchange movements	134	19	153	533	(558)	423	(1 099)	642	(378)
Credit risk – Risk-weighted assets at end	54 474	3 500	57 974	58 377	57 625	57 037	56 066	56 855	55 148
Market risk – Risk-weighted assets at beginning			4 055	3 336	3 097	3 263	2 768	3 815	2 807
Movement in risk levels ⁽³⁾			700	719	239	(166)	353	(1 047)	1 008
Model updates			–	–	–	–	142	–	–
Methodology and policy			–	–	–	–	–	–	–
Acquisitions and disposals			–	–	–	–	–	–	–
Market risk – Risk-weighted assets at end			4 755	4 055	3 336	3 097	3 263	2 768	3 815
Operational risk – Risk-weighted assets at beginning			10 402	10 218	10 039	9 827	9 760	9 611	9 495
Movement in risk levels ⁽³⁾			137	184	179	212	67	149	116
Acquisitions and disposals			–	–	–	–	–	–	–
Operational risk – Risk-weighted assets at end			10 539	10 402	10 218	10 039	9 827	9 760	9 611
Risk-weighted assets at end			73 268	72 834	71 179	70 173	69 156	69 383	68 574

(1) Figures are presented in an "all-in" basis.

(2) Calculated based on CET1 risk-weighted assets.

(3) Also includes foreign exchange movements that are not considered material.



Reconciliation of Balance Sheet with Credit Risk Exposures

(unaudited) (millions of Canadian dollars)	Q3 2018							
	Exposures subject to credit risk capital					Other exposures		Balance sheet
	Drawn		Other exposures			Subject to market risk capital	All other ⁽¹⁾	
	Non-retail	Retail	Securitization	Repo-style transactions	Derivatives financial instruments			
Assets								
Cash and deposits with financial institutions ⁽²⁾	10 186	-	-	-	-	-	851	11 037
Securities								
At fair value through profit or loss	8 882	-	-	-	-	48 928	-	57 810
At fair value through other comprehensive income	7 034	-	-	-	-	-	123	7 157
At amortized cost	8 402	-	-	-	-	-	-	8 402
	24 318	-	-	-	-	48 928	123	73 369
Securities purchased under reverse repurchase agreements and securities borrowed	-	-	-	16 253	-	-	-	16 253
Loans and acceptances								
Residential mortgage ⁽³⁾	27 552	25 179	-	-	-	-	-	52 731
Personal	-	36 459	-	-	-	-	-	36 459
Credit card	-	896	1 389	-	-	-	-	2 285
Business and government	45 225	133	-	-	-	-	-	45 358
	72 777	62 667	1 389	-	-	-	-	136 833
Customers' liability under acceptances	6 661	-	-	-	-	-	-	6 661
Allowances for credit losses	(272)	(386)	-	-	-	-	-	(658)
	79 166	62 281	1 389	-	-	-	-	142 836
Other								
Derivative financial instruments ⁽²⁾	-	-	-	-	7 625	-	-	7 625
Investments in associates and joint ventures	-	-	-	-	-	-	649	649
Premises and equipment	-	1	-	-	-	-	590	591
Goodwill	-	-	-	-	-	-	1 410	1 410
Intangible assets	-	-	-	-	-	-	1 271	1 271
Other assets	-	-	-	-	-	-	2 596	2 596
	-	1	-	-	7 625	-	6 516	14 142
	113 670	62 282	1 389	16 253	7 625	48 928	7 490	257 637

(1) Includes deconsolidated assets related to insurance activities and all other assets that are neither subject to credit nor market risks.

(2) These exposures may also be subject to market risk.

(3) As per Basel definition, NHA MBS pooled and 5 units or more mortgages are included in the non-retail category.



Standardized Credit Risk Exposure Under the Basel Asset Categories and by Risk Weight ⁽¹⁾

(unaudited) (millions of Canadian dollars)		2018																							
		Q3								Q2								Q1							
		0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total
Risk Weight																									
Retail																									
Residential mortgage	-	-	2 421	15	948	84	-	3 468	-	-	2 282	16	944	82	-	3 324	-	-	2 023	18	985	75	-	3 101	
Other retail	-	-	-	-	5 460	12	12	5 484	-	-	-	-	5 723	11	11	5 745	-	-	-	-	5 511	1	-	5 512	
	-	-	2 421	15	6 408	96	12	8 952	-	-	2 282	16	6 667	93	11	9 069	-	-	2 023	18	6 496	76	-	8 613	
Non-Retail																									
Corporate	-	-	-	-	-	6 296	-	6 296	-	-	-	-	-	5 246	-	5 246	-	-	-	-	-	6 391	27	6 418	
Sovereign	287	-	-	13	-	369	-	669	320	-	-	12	-	336	-	668	224	-	-	34	-	292	-	550	
Financial Institutions	-	181	-	1	-	542	4	728	-	186	-	1	-	417	12	616	-	100	-	1	-	354	11	466	
	287	181	-	14	-	7 207	4	7 693	320	186	-	13	-	5 999	12	6 530	224	100	-	35	-	7 037	38	7 434	
Trading	9	-	-	-	-	79	-	88	13	-	-	-	-	121	-	134	6	-	-	-	-	80	-	86	
Total	296	181	2 421	29	6 408	7 382	16	16 733	333	186	2 282	29	6 667	6 213	23	15 733	230	100	2 023	53	6 496	7 193	38	16 133	

(unaudited) (millions of Canadian dollars)		2017																							
		Q4								Q3								Q2							
		0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total
Risk Weight																									
Retail																									
Residential mortgage	-	-	1 909	22	422	72	-	2 425	-	-	1 788	21	519	73	-	2 401	-	-	1 673	25	460	83	-	2 241	
Other retail	-	-	-	-	5 925	-	-	5 925	-	-	-	-	5 872	-	-	5 872	-	-	-	-	5 948	-	-	5 948	
	-	-	1 909	22	6 347	72	-	8 350	-	-	1 788	21	6 391	73	-	8 273	-	-	1 673	25	6 408	83	-	8 189	
Non-Retail																									
Corporate	-	-	-	-	-	6 395	-	6 395	-	-	-	-	-	4 395	-	4 395	-	-	-	-	-	4 555	-	4 555	
Sovereign	254	-	-	38	-	263	-	555	300	-	-	33	-	272	-	605	362	-	-	33	-	249	-	644	
Financial Institutions	-	198	-	3	-	349	12	562	-	331	-	-	-	228	11	570	-	349	-	-	-	150	13	512	
	254	198	-	41	-	7 007	12	7 512	300	331	-	33	-	4 895	11	5 570	362	349	-	33	-	4 954	13	5 711	
Trading	10	-	-	-	-	168	-	178	4	-	-	-	-	121	-	125	11	-	-	-	-	202	-	213	
Total	264	198	1 909	63	6 347	7 247	12	16 040	304	331	1 788	54	6 391	5 089	11	13 968	373	349	1 673	58	6 408	5 239	13	14 113	

(1) Exposure amounts are the expected gross exposure upon the default of an obligor. These amounts are net of specific allowance but do not reflect the impact of credit risk mitigation and collateral held.

Maximum Credit Risk Exposure Under the Basel Asset Categories⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018																	
	Q3						Q2						Q1					
	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total
Retail																		
Residential mortgage	44 922	8 266	–	–	–	53 188	42 718	8 044	–	–	–	50 762	41 981	7 837	–	–	–	49 818
Qualifying revolving retail	2 802	3 481	–	–	–	6 283	2 762	3 368	–	–	–	6 130	2 775	3 295	–	–	–	6 070
Other retail	14 944	1 560	–	–	14	16 518	15 187	1 507	–	–	13	16 707	14 842	1 446	–	–	14	16 302
	62 668	13 307	–	–	14	75 989	60 667	12 919	–	–	13	73 599	59 598	12 578	–	–	14	72 190
Non-retail																		
Corporate	49 772	16 591	19 279	13	3 060	88 715	47 911	17 822	17 782	15	3 000	86 530	45 294	17 134	19 334	12	2 688	84 462
Sovereign	26 155	4 943	40 220	454	178	71 950	22 985	4 981	46 202	373	147	74 688	23 016	4 693	45 411	798	144	74 062
Financial Institutions	4 118	307	65 481	428	764	71 098	4 626	313	60 412	445	607	66 403	4 474	168	53 787	370	694	59 493
	80 045	21 841	124 980	895	4 002	231 763	75 522	23 116	124 396	833	3 754	227 621	72 784	21 995	118 532	1 180	3 526	218 017
Trading book	–	–	–	8 247	–	8 247	–	–	–	8 617	–	8 617	–	–	–	9 539	–	9 539
Securitization	–	–	–	–	4 791	4 791	–	–	–	–	5 017	5 017	–	–	–	–	5 012	5 012
Total - Gross Credit Risk	142 713	35 148	124 980	9 142	8 807	320 790	136 189	36 035	124 396	9 450	8 784	314 854	132 382	34 573	118 532	10 719	8 552	304 758

Standardized Approach	12 511	248	3 494	94	386	16 733	12 576	240	2 417	141	359	15 733	11 806	51	3 842	93	341	16 133
AIRB Approach⁽²⁾	130 202	34 900	121 486	9 048	8 421	304 057	123 613	35 795	121 979	9 309	8 425	299 121	120 576	34 522	114 690	10 626	8 211	288 625
Total - Gross Credit Risk	142 713	35 148	124 980	9 142	8 807	320 790	136 189	36 035	124 396	9 450	8 784	314 854	132 382	34 573	118 532	10 719	8 552	304 758
Adjustment to exposure for collateral																		
Standardized Approach	–	–	(3 363)	(12)	–	(3 375)	–	–	(2 301)	(7)	–	(2 308)	–	–	(3 760)	(4)	–	(3 764)
AIRB Approach⁽²⁾	–	–	(115 173)	–	–	(115 173)	–	–	(112 437)	–	–	(112 437)	–	–	(108 480)	–	–	(108 480)
Total - Net Credit Risk	142 713	35 148	6 444	9 130	8 807	202 242	136 189	36 035	9 658	9 443	8 784	200 109	132 382	34 573	6 292	10 715	8 552	192 514

(unaudited) (millions of Canadian dollars)	2017																	
	Q4						Q3						Q2					
	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total	Drawn	Undrawn commitments	Repo-style transactions	OTC derivatives	Other off-balance sheet items	Total
Retail																		
Residential mortgage	41 308	7 720	–	–	–	49 028	40 891	6 307	–	–	–	47 198	38 588	6 146	–	–	–	44 734
Qualifying revolving retail	2 834	3 362	–	–	–	6 196	2 797	3 230	–	–	–	6 027	2 772	3 072	–	–	–	5 844
Other retail	15 169	1 452	–	–	14	16 635	15 086	1 412	–	–	58	16 556	14 990	1 370	–	–	88	16 448
	59 311	12 534	–	–	14	71 859	58 774	10 949	–	–	58	69 781	56 350	10 588	–	–	88	67 026
Non-retail																		
Corporate	44 554	16 002	16 553	14	2 936	80 059	44 022	15 368	12 559	15	2 921	74 885	42 130	16 610	13 583	20	2 845	75 188
Sovereign	24 325	4 024	35 289	314	144	64 096	21 834	3 773	33 267	335	130	59 339	22 962	3 712	35 058	316	139	62 187
Financial Institutions	4 505	193	52 811	358	641	58 508	4 624	221	47 414	437	624	53 320	4 214	227	52 107	426	723	57 697
	73 384	20 219	104 653	686	3 721	202 663	70 480	19 362	93 240	787	3 675	187 544	69 306	20 549	100 748	762	3 707	195 072
Trading book	–	–	–	8 309	–	8 309	–	–	–	8 168	–	8 168	–	–	–	9 129	–	9 129
Securitization	–	–	–	–	4 740	4 740	–	–	–	–	5 152	5 152	–	–	–	–	4 836	4 836
Total - Gross Credit Risk	132 695	32 753	104 653	8 995	8 475	287 571	129 254	30 311	93 240	8 955	8 885	270 645	125 656	31 137	100 748	9 891	8 631	276 063

Standardized Approach	11 154	230	4 101	189	366	16 040	11 268	244	1 904	134	418	13 968	10 968	76	2 354	230	485	14 113
AIRB Approach⁽²⁾	121 541	32 523	100 552	8 806	8 109	271 531	117 986	30 067	91 336	8 821	8 467	256 677	114 688	31 061	98 394	9 661	8 146	261 950
Total - Gross Credit Risk	132 695	32 753	104 653	8 995	8 475	287 571	129 254	30 311	93 240	8 955	8 885	270 645	125 656	31 137	100 748	9 891	8 631	276 063
Adjustment to exposure for collateral																		
Standardized Approach	–	–	(4 063)	(8)	–	(4 071)	–	–	(1 879)	(3)	–	(1 882)	–	–	(2 309)	(10)	–	(2 319)
AIRB Approach⁽²⁾	–	–	(95 370)	–	–	(95 370)	–	–	(86 034)	–	–	(86 034)	–	–	(92 119)	–	–	(92 119)
Total - Net Credit Risk	132 695	32 753	5 220	8 987	8 475	188 130	129 254	30 311	5 327	8 952	8 885	182 729	125 656	31 137	6 320	9 881	8 631	181 625

(1) These amounts do not take into account allowances for credit losses nor amounts pledged as collateral. The tables also exclude equity securities.

(2) For drawn, undrawn and Other off-balance sheet exposures, eligible financial collateral is taken into account in the Bank's Loss Given Default (LGD) models.

Credit Quality of AIRB Exposure - Retail Portfolios⁽¹⁾

			2018								
			Q3								
			EAD	Notional of undrawn commitments	Exposure weighted-average (EAD %)	Exposure weighted-average (PD %)	Exposure weighted-average (LGD %)	Exposure weighted-average risk weight asset (RWA %)	RWA	Expected Losses (EL)	EL adjusted average risk weight % ⁽²⁾
Canadian residential mortgage and HELOCs	Risk Grade	PD bands									
Insured Drawn and Undrawn⁽³⁾	Exceptionally low	0.000% - 0.144%	831	–	100%	0,08%	17,9%	3,4%	28	0,1	4%
	Very low	0.145% - 0.506%	1 141	–	100%	0,30%	11,3%	5,7%	65	0,4	6%
	Low	0.507% - 1.116%	571	–	100%	0,76%	6,4%	6,5%	37	0,3	7%
	Low	1.117% - 2.681%	291	–	100%	1,72%	4,1%	7,2%	21	0,2	8%
	Medium	2.682% - 9.348%	163	–	100%	4,60%	3,4%	10,5%	17	0,3	12%
	High	9.349% - 99.99%	75	–	100%	27,21%	3,0%	15,9%	12	0,5	26%
	Default	100.00%	45	–	100%	100,00%	3,3%	17,0%	8	1,1	47%
				3 117	–	100%	2,77%	10,8%	6,0%	188	2,9
Uninsured Undrawn⁽⁴⁾	Exceptionally low	0.000% - 0.144%	6 594	13 195	63%	0,05%	17,3%	2,5%	161	0,6	3%
	Very low	0.145% - 0.506%	1 330	1 882	78%	0,26%	19,5%	9,3%	124	0,7	10%
	Low	0.507% - 1.116%	229	313	81%	0,72%	19,3%	19,4%	45	0,3	21%
	Low	1.117% - 2.681%	65	97	76%	1,65%	18,2%	32,0%	21	0,2	36%
	Medium	2.682% - 9.348%	23	33	83%	4,50%	18,3%	55,8%	13	0,2	66%
	High	9.349% - 99.99%	3	3	96%	15,50%	20,1%	105,0%	4	0,1	148%
	Default	100.00%	2	3	79%	100,00%	16,2%	167,4%	4	0,1	202%
				8 246	15 526	66%	0,16%	17,7%	4,5%	372	2,2
Uninsured Drawn⁽⁵⁾	Exceptionally low	0.000% - 0.144%	21 213			0,07%	21,2%	3,8%	811	3,2	4%
	Very low	0.145% - 0.506%	11 976			0,27%	23,4%	11,5%	1 374	7,5	12%
	Low	0.507% - 1.116%	3 178			0,73%	23,3%	23,4%	744	5,4	26%
	Low	1.117% - 2.681%	1 123			1,72%	23,0%	40,7%	457	4,5	46%
	Medium	2.682% - 9.348%	575			4,64%	22,2%	69,0%	397	5,9	82%
	High	9.349% - 99.99%	213			23,61%	23,0%	122,9%	261	12,0	193%
	Default	100.00%	79			100,00%	21,9%	145,8%	115	10,2	308%
				38 357			0,64%	22,2%	10,8%	4 159	48,7
Qualifying revolving credit	Exceptionally low	0.000% - 0.144%	3 345	5 860	60%	0,05%	81,3%	2,6%	88	1,3	3%
	Very low	0.145% - 0.506%	1 149	968	79%	0,29%	83,5%	11,9%	136	2,8	15%
	Low	0.507% - 1.116%	651	310	89%	0,78%	81,4%	25,5%	166	4,1	33%
	Low	1.117% - 2.681%	595	186	96%	1,80%	86,3%	51,1%	304	9,2	71%
	Medium	2.682% - 9.348%	426	55	102%	4,58%	86,5%	97,3%	415	16,9	147%
	High	9.349% - 99.99%	94	4	105%	22,52%	84,0%	210,6%	199	18,6	457%
	Default	100.00%	23	–	103%	100,00%	67,0%	140,5%	32	13,4	871%
				6 283	7 383	74%	1,34%	82,5%	21,3%	1 340	66,3
Other retail⁽⁶⁾	Exceptionally low	0.000% - 0.144%	2 637	1 818	82%	0,06%	45,8%	7,8%	206	0,8	8%
	Very low	0.145% - 0.506%	2 913	453	97%	0,30%	57,0%	29,9%	870	5,1	32%
	Low	0.507% - 1.116%	2 630	387	98%	0,78%	61,7%	55,7%	1 465	12,7	62%
	Low	1.117% - 2.681%	1 747	117	98%	1,71%	63,6%	77,9%	1 361	19,1	92%
	Medium	2.682% - 9.348%	788	57	99%	4,36%	64,0%	93,0%	732	22,1	128%
	High	9.349% - 99.99%	212	5	99%	18,95%	65,6%	138,5%	293	27,1	299%
	Default	100.00%	107	2	100%	100,00%	57,9%	177,2%	190	50,2	760%
				11 034	2 839	94%	2,20%	57,2%	46,4%	5 117	137,1
			67 037	25 748	87%	1,00%	32,5%	16,7%	11 176	257,2	21%

(1) Represents retail exposures under the AIRB approach. Amounts are before allowance for credit losses and after credit risk mitigation.

(2) EL adjusted average risk weight is calculated as (RWA + 12.5 x EL) / EAD.

(3) Includes insured drawn and undrawn retail mortgages and home equity lines of credit.

(4) Includes only uninsured undrawn retail mortgages and home equity lines of credit.

(5) Includes only uninsured drawn retail mortgages and home equity lines of credit.

(6) Includes all other drawn and undrawn retail exposures.

Credit Quality of AIRB Exposure - Retail Portfolios⁽¹⁾ (continued)

			2018								
			Q2								
			EAD	Notional of undrawn commitments	Exposure weighted-average (EAD %)	Exposure weighted-average (PD %)	Exposure weighted-average (LGD %)	Exposure weighted-average risk weight asset (RWA %)	RWA	Expected Losses (EL)	EL adjusted average risk weight % ⁽²⁾
Canadian residential mortgage and HELOCs	Risk Grade	PD bands									
Insured Drawn and Undrawn ⁽³⁾	Exceptionally low	0.000% - 0.144%	683	–	100%	0,07%	18,0%	3,0%	22	0,1	3%
	Very low	0.145% - 0.506%	832	–	100%	0,30%	11,0%	6,0%	48	0,3	6%
	Low	0.507% - 1.116%	394	–	100%	0,76%	6,0%	7,0%	26	0,2	7%
	Low	1.117% - 2.681%	206	–	100%	1,71%	4,0%	8,0%	16	0,2	9%
	Medium	2.682% - 9.348%	113	–	100%	4,73%	4,0%	11,0%	12	0,2	13%
	High	9.349% - 99.99%	73	–	100%	29,23%	3,0%	16,0%	12	0,7	27%
	Default	100.00%	47	–	100%	100,00%	3,0%	16,0%	7	1,0	47%
				2 348	–	100%	3,53%	11,0%	6,0%	143	2,7
Uninsured Undrawn ⁽⁴⁾	Exceptionally low	0.000% - 0.144%	6 419	12 875	63%	0,05%	17,0%	2,0%	158	0,6	3%
	Very low	0.145% - 0.506%	1 295	1 856	78%	0,26%	19,0%	9,0%	120	0,7	10%
	Low	0.507% - 1.116%	212	295	80%	0,72%	19,0%	19,0%	41	0,3	21%
	Low	1.117% - 2.681%	69	105	77%	1,65%	19,0%	32,0%	22	0,2	36%
	Medium	2.682% - 9.348%	24	27	87%	4,26%	19,0%	58,0%	14	0,2	69%
	High	9.349% - 99.99%	2	2	98%	15,29%	18,0%	99,0%	2	0,1	139%
	Default	100.00%	3	4	79%	100,00%	16,0%	157,0%	5	0,1	205%
				8 024	15 164	66%	0,17%	18,0%	5,0%	362	2,2
Uninsured Drawn ⁽⁵⁾	Exceptionally low	0.000% - 0.144%	20 339			0,07%	21,0%	4,0%	780	3,1	4%
	Very low	0.145% - 0.506%	11 553			0,27%	24,0%	12,0%	1 331	7,3	12%
	Low	0.507% - 1.116%	3 148			0,73%	24,0%	24,0%	747	5,4	26%
	Low	1.117% - 2.681%	1 133			1,71%	23,0%	40,0%	457	4,4	45%
	Medium	2.682% - 9.348%	585			4,63%	23,0%	71,0%	414	6,3	84%
	High	9.349% - 99.99%	223			22,97%	23,0%	123,0%	273	12,4	192%
	Default	100.00%	85			100,00%	22,0%	141,0%	120	10,7	297%
				37 066			0,68%	22,0%	11,0%	4 122	49,6
Qualifying revolving credit	Exceptionally low	0.000% - 0.144%	3 236	5 700	60%	0,05%	81,0%	3,0%	84	1,3	3%
	Very low	0.145% - 0.506%	1 124	944	79%	0,29%	83,0%	12,0%	133	2,7	15%
	Low	0.507% - 1.116%	642	310	89%	0,78%	81,0%	26,0%	164	4,1	34%
	Low	1.117% - 2.681%	590	183	96%	1,80%	86,0%	51,0%	300	9,2	70%
	Medium	2.682% - 9.348%	419	54	102%	4,58%	86,0%	97,0%	404	16,4	146%
	High	9.349% - 99.99%	97	4	104%	22,25%	83,0%	208,0%	201	18,4	447%
	Default	100.00%	22	–	104%	100,00%	64,0%	122,0%	27	13,2	862%
				6 130	7 195	74%	1,36%	82,0%	21,0%	1 313	65,3
Other retail ⁽⁶⁾	Exceptionally low	0.000% - 0.144%	2 432	1 743	82%	0,07%	47,0%	8,0%	196	0,7	8%
	Very low	0.145% - 0.506%	3 070	452	97%	0,30%	55,0%	29,0%	876	5,1	31%
	Low	0.507% - 1.116%	2 592	363	98%	0,78%	62,0%	56,0%	1 443	12,7	62%
	Low	1.117% - 2.681%	1 752	113	99%	1,71%	64,0%	78,0%	1 375	19,6	92%
	Medium	2.682% - 9.348%	805	58	98%	4,37%	64,0%	93,0%	750	22,6	128%
	High	9.349% - 99.99%	211	5	100%	18,75%	65,0%	137,0%	288	26,6	294%
	Default	100.00%	100	2	99%	100,00%	60,0%	184,0%	185	48,0	781%
				10 962	2 736	94%	2,15%	57,0%	47,0%	5 113	135,3
			64 530	25 095	86%	1,03%	33,0%	17,0%	11 053	255,1	22%

(1) Represents retail exposures under the AIRB approach. Amounts are before allowance for credit losses and after credit risk mitigation.

(2) EL adjusted average risk weight is calculated as $(RWA + 12.5 \times EL) / EAD$.

(3) Includes insured drawn and undrawn retail mortgages and home equity lines of credit.

(4) Includes only uninsured undrawn retail mortgages and home equity lines of credit.

(5) Includes only uninsured drawn retail mortgages and home equity lines of credit.

(6) Includes all other drawn and undrawn retail exposures.

AIRB Credit Risk Exposure: Non-retail Portfolios⁽¹⁾

			Q3 2018							Q2 2018							Q1 2018													
(unaudited) (millions of Canadian dollars)			Corporate AIRB exposures by Internal PD grade																											
Internal Ratings grades	PD Range 0.000%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)							
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other											
1	0.000 - 0.035	AAA-, AA-	13	23	71	107	0.03%	42.1%	6	6%	104	12	87	203	0.03%	48.4%	4	2%	99	10	35	144	0.03%	33.0%	3	2%				
1.5	0.035 - 0.044	A+	76	60	164	300	0.04%	37.3%	17	6%	71	64	452	587	0.04%	41.4%	33	6%	70	54	260	384	0.04%	40.9%	23	6%				
2	0.044 - 0.063	A	216	675	630	1 521	0.05%	51.1%	253	17%	230	787	381	1 398	0.05%	50.6%	289	21%	221	786	258	1 265	0.05%	50.8%	277	22%				
2.5	0.063 - 0.103	A-	1 019	1 219	1 717	2 409	0.08%	48.8%	555	23%	918	1 108	259	2 285	0.08%	48.0%	524	23%	989	1 209	250	2 448	0.08%	46.8%	553	23%				
3	0.103 - 0.170	BBB+	4 965	3 329	731	9 025	0.13%	36.2%	2 244	25%	5 150	3 848	790	9 788	0.13%	36.3%	2 399	25%	4 535	3 694	614	8 843	0.13%	37.4%	2 240	24%				
3.5	0.170 - 0.280	BBB	9 089	3 872	542	13 503	0.22%	36.9%	4 273	32%	7 913	4 103	621	12 637	0.22%	38.3%	3 062	32%	7 123	4 079	603	11 805	0.22%	38.9%	4 000	34%				
4	0.280 - 0.462	BBB-	9 402	3 696	996	14 094	0.36%	34.8%	5 330	38%	8 775	3 652	820	13 247	0.36%	34.0%	5 033	38%	8 351	3 202	661	12 214	0.36%	35.1%	4 744	39%				
4.5	0.462 - 0.762	BB+	6 514	1 678	370	8 562	0.59%	34.5%	3 851	45%	6 402	1 983	369	8 754	0.59%	35.0%	4 081	47%	6 175	1 955	289	8 419	0.59%	35.2%	3 917	47%				
5	0.762 - 1.256	BB	7 346	982	301	8 629	0.98%	34.2%	4 752	55%	7 053	1 070	320	8 443	0.98%	34.4%	4 454	53%	6 586	1 096	305	7 987	0.98%	34.1%	4 147	52%				
5.5	1.256 - 2.070	BB-	3 401	475	48	3 924	1.61%	34.8%	2 552	65%	3 289	463	47	3 799	1.61%	35.1%	2 504	66%	3 269	486	59	3 914	1.61%	36.1%	2 549	65%				
6	2.070 - 3.412	B+	2 093	285	53	2 431	2.66%	34.2%	1 779	73%	2 252	276	82	2 610	2.66%	34.7%	1 952	75%	2 282	244	56	2 582	2.66%	34.8%	1 899	74%				
6.5	3.412 - 5.625	B	1 498	132	86	1 716	4.38%	24.7%	1 179	69%	1 630	184	110	1 924	4.38%	19.8%	1 025	53%	1 596	158	108	1 862	4.38%	20.6%	1 028	55%				
7	5.625 - 9.272	B-	543	54	18	615	7.22%	29.0%	516	84%	702	53	21	776	7.22%	34.2%	800	103%	750	78	23	851	7.22%	34.3%	893	105%				
7.5	9.272 - 15.284	CCC+	380	39	10	429	11.90%	38.5%	660	154%	348	21	12	381	11.90%	37.2%	548	144%	296	37	12	345	11.90%	33.5%	433	126%				
8	15.284 - 25.195	CCC	115	5	1	121	19.62%	34.6%	188	155%	45	5	1	51	19.62%	35.8%	76	149%	52	3	2	57	19.62%	38.8%	94	165%				
8.5	25.195 - 100	CCC-	112	4	2	118	32.35%	34.5%	203	172%	83	7	1	90	32.35%	35.7%	155	172%	31	2	1	34	32.35%	29.2%	45	132%				
9	100	CC	248	11	1	260	100.00%	24.1%	139	53%	317	140	91	548	100.00%	30.7%	262	48%	323	9	1	333	100.00%	28.1%	186	56%				
9.5	100	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
10	100	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Total			47 030	16 539	4 195	67 764	1.09%	35.8%	28 497	42%	45 282	17 776	4 463	67 521	1.23%	36.4%	28 145	42%	42 848	17 102	3 537	63 487	1.23%	36.4%	27 031	43%				

			Q3 2018							Q2 2018							Q1 2018													
(unaudited) (millions of Canadian dollars)			Sovereign AIRB exposures by Internal PD grade																											
Internal Ratings grades	PD Range 0.000%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)							
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other											
1	0.000 - 0.010	AAA-, AA-	19 549	1 095	1 001	21 645	0.01%	6.3%	149	1%	15 698	277	1 430	17 405	0.01%	5.5%	103	1%	15 651	266	1 751	17 668	0.01%	5.5%	124	1%				
1.5	0.010 - 0.019	A+	4 310	2 737	712	7 759	0.03%	13.0%	284	4%	4 748	3 658	1 045	9 451	0.03%	12.7%	339	4%	4 859	3 431	816	9 106	0.02%	12.7%	337	4%				
2	0.019 - 0.033	A	1 491	1 081	744	3 316	0.04%	17.1%	178	5%	1 697	1 024	908	3 629	0.04%	17.0%	190	5%	1 765	968	784	3 517	0.04%	17.1%	185	5%				
2.5	0.033 - 0.060	A-	85	1	1 446	1 532	0.07%	10.8%	38	2%	86	-	1 789	1 875	0.07%	10.8%	46	2%	85	-	1 008	1 093	0.07%	10.8%	30	3%				
3	0.060 - 0.107	BBB+	-	-	4	4	0.12%	17.2%	-	-	-	2	2	2	0.12%	17.2%	-	-	-	2	2	2	0.12%	17.2%	-	-				
3.5	0.107 - 0.191	BBB	-	-	86	86	0.21%	11.6%	5	6%	318	-	318	318	0.21%	11.6%	18	6%	-	3	3	3	0.21%	11.6%	-	-				
4	0.191 - 0.342	BBB-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
4.5	0.342 - 0.612	BB+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
5	0.612 - 1.095	BB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
5.5	1.095 - 1.960	BB-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
6	1.960 - 3.507	B+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
6.5	3.507 - 6.276	B	68	28	10	106	5.07%	14.1%	44	42%	75	22	16	113	5.07%	14.1%	47	42%	107	28	10	145	5.07%	14.1%	60	41%				
7	6.276 - 11.231	B-	14	-	-	14	8.62%	18.5%	10	71%	15	-	15	15	8.62%	15.0%	8	53%	-	-	-	-	-	-	-	-				
7.5	11.231 - 20.099	CCC+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
8	20.099 - 35.967	CCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
8.5	35.967 - 100	CCC-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
9	100	CC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
9.5	100	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
10	100	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total			25 517	4 942	4 003	34 462	0.04%	9.1%	708	2%	22 319	4 981	5 508	32 808	0.04%	9.1%	751	2%	22 467	4 693	4 374	31 534	0.04%	9.1%	736	2%				

			Q3 2018							Q2 2018							Q1 2018													
(unaudited) (millions of Canadian dollars)			Financial Institutions AIRB exposures by Internal PD grade																											
Internal Ratings grades	PD Range 0.000%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)							
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other											
1	0.000 - 0.035	AAA-, AA-	793	-	453	1 246	0.03%	44.1%	140	11%	1 077	-	240	1 317	0.03%	47.8%	153	12%	347	-	256	603	0.03%	42.9%	61	10%				
1.5	0.035 - 0.044	A+	415	-	1 431	1 846	0.04%	44.4%	154	8%	542	-	1 986	2 528	0.04%	44.7%	228	9%	619	-	1 551	2 170	0.04%	44.4%	210	10%				
2	0.044 - 0.063	A	335	-	166	501	0.05%	37.6%	77	15%	336	-	156	492	0.05%	34.9%	74	15%	570	-	69	639	0.05%	39.8%	96	15%				
2.5	0.063 - 0.103	A-	304	-	153	457	0.08%	51.0%	90	20%	370	-	395	765	0.08%	50.1%	146	19%	425	30	153	608	0.08%	49.5%	132	22%				
3	0.103 - 0.170	BBB+	86	-	80	166	0.13%	51.0%	50	30%	57	-	124	181	0.13%	51.9%	53	29%	278	-	162	440	0.13%	50.6%	139	32%				
3.5	0.170 - 0.280	BBB	1 316																											

AIRB Credit Risk Exposure: Non-retail Portfolios⁽¹⁾ (continued)

Q4 2017											Q3 2017											Q2 2017										
Corporate AIRB exposures by Internal PD grade											Corporate AIRB exposures by Internal PD grade											Corporate AIRB exposures by Internal PD grade										
Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)									
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other													
1	0.000 - 0.035	AAA-, AA-	88	20	46	154	0.03%	36.6%	4	3%	66	42	38	146	0.03%	49.3%	7	5%	26	19	40	95	0.03%	39.3%	6	6%						
1.5	0.035 - 0.044	A+	80	47	190	317	0.04%	40.2%	20	6%	55	11	229	295	0.04%	41.2%	17	6%	63	6	387	456	0.04%	42.4%	26	6%						
2	0.044 - 0.063	A	208	596	590	1,394	0.05%	53.3%	263	19%	153	592	1,316	0.05%	52.5%	253	19%	146	577	618	1,341	0.05%	52.9%	257	19%							
2.5	0.063 - 0.103	A-	988	1,151	198	2,337	0.08%	45.1%	507	22%	1,070	1,121	305	2,496	0.08%	46.0%	524	21%	1,269	1,281	2,666	2,816	0.08%	48.5%	647	23%						
3	0.103 - 0.170	BBB+	4,815	3,262	595	8,672	0.13%	37.0%	2,171	25%	4,826	3,078	473	8,377	0.13%	37.4%	2,046	24%	3,897	2,834	480	7,211	0.13%	39.5%	1,883	26%						
3.5	0.170 - 0.280	BBB	7,091	3,554	517	11,162	0.22%	39.5%	3,755	34%	6,993	3,137	437	10,567	0.22%	40.0%	3,586	34%	6,841	4,133	426	11,400	0.22%	40.8%	3,918	34%						
4	0.280 - 0.462	BBB-	7,764	3,115	683	11,562	0.36%	35.8%	4,521	39%	7,250	3,180	683	11,113	0.36%	35.5%	4,352	39%	6,774	3,469	566	10,809	0.36%	34.2%	4,125	38%						
4.5	0.462 - 0.762	BB+	6,540	1,859	177	8,576	0.59%	35.2%	3,841	45%	6,256	1,666	172	8,094	0.59%	35.4%	3,524	44%	6,212	1,545	194	7,951	0.59%	35.8%	3,394	43%						
5	0.762 - 1.256	BB	6,522	1,117	262	7,901	0.98%	33.6%	4,068	51%	6,719	1,250	301	8,270	0.98%	34.8%	4,349	53%	6,637	1,253	390	8,280	0.98%	34.8%	4,236	51%						
5.5	1.256 - 2.070	BB-	3,053	435	103	3,591	1.61%	34.3%	2,240	62%	3,220	438	87	3,745	1.61%	35.2%	2,278	61%	3,148	622	93	3,863	1.61%	36.2%	2,536	66%						
6	2.070 - 3.412	B+	2,337	311	70	2,718	2.66%	34.0%	1,959	72%	2,117	297	109	2,523	2.66%	32.2%	1,819	72%	2,257	391	59	2,707	2.66%	33.7%	1,926	71%						
6.5	3.412 - 5.625	B	1,647	145	97	1,889	4.38%	20.5%	1,024	54%	1,633	172	86	1,891	4.38%	20.6%	1,037	55%	1,478	187	151	1,816	4.38%	34.8%	1,877	103%						
7	5.625 - 9.272	B-	798	145	33	976	7.22%	32.5%	975	100%	783	149	26	958	7.22%	30.1%	883	92%	694	205	8	907	7.22%	31.2%	882	97%						
7.5	9.272 - 15.284	CCC+	267	29	11	307	11.90%	28.9%	320	104%	234	24	6	264	11.90%	22.0%	201	76%	268	29	6	303	11.90%	23.4%	248	82%						
8	15.284 - 25.195	CCC	51	2	2	55	19.62%	39.6%	92	167%	47	9	5	56	19.62%	37.9%	90	161%	37	5	4	42	19.62%	30.4%	51	121%						
8.5	25.195 - 100	CCC-	34	4	-	38	32.35%	28.1%	47	124%	38	1	1	40	32.35%	31.9%	56	140%	35	1	1	37	32.35%	43.0%	70	189%						
9	100	CC	282	1	-	283	100.00%	32.1%	187	66%	39	-	-	100.00%	24.9%	-	249	64%	309	1	-	310	100.00%	26.9%	236	76%						
9.5	100	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10	100	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Total			42 565	15 793	3 574	61 932	1.21%	36.3%	25 994	42%	41 850	15 146	3 545	60 541	1.37%	36.5%	25 271	42%	40 101	16 558	3 685	60 344	1.25%	37.5%	26 318	44%						

Q4 2017											Q3 2017											Q2 2017										
Sovereign AIRB exposures by Internal PD grade											Sovereign AIRB exposures by Internal PD grade											Sovereign AIRB exposures by Internal PD grade										
Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)									
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other													
1	0.000 - 0.010	AAA-, AA-	16 898	282	913	18 093	0.01%	5.8%	125	1%	14 578	274	1 023	15 875	0.01%	5.6%	118	1%	15 759	295	940	16 994	0.01%	5.9%	149	1%						
1.5	0.010 - 0.019	A+	4 972	2 666	662	8 300	0.03%	12.8%	320	4%	4 755	2 482	1 007	8 244	0.03%	12.9%	321	4%	4 605	2 646	848	8 099	0.03%	13.0%	229	3%						
2	0.019 - 0.033	A	1 657	1 028	463	3 148	0.04%	17.8%	178	6%	1 579	961	73	2 613	0.04%	18.2%	168	6%	1 685	712	150	2 547	0.03%	17.8%	121	5%						
2.5	0.033 - 0.060	A-	85	-	1 052	1 137	0.07%	10.8%	32	3%	84	1	231	316	0.07%	10.7%	11	3%	8	-	287	296	0.05%	10.8%	4	1%						
3	0.060 - 0.107	BBB+	-	-	5	5	0.12%	17.2%	-	-	-	-	740	740	0.12%	11.3%	28	4%	-	-	623	623	0.08%	0.1%	17	3%						
3.5	0.107 - 0.191	BBB	-	-	5	5	0.21%	11.6%	-	-	-	-	10	10	0.21%	11.6%	1	10%	-	-	7	7	0.14%	11.6%	-	-						
4	0.191 - 0.342	BBB-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4.5	0.342 - 0.612	BB+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5	0.612 - 1.095	BB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5.5	1.095 - 1.960	BB-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6	1.960 - 3.507	B+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6.5	3.507 - 6.276	B	159	48	11	218	5.07%	14.1%	91	42%	216	54	5	275	5.07%	14.1%	115	42%	245	57	12	314	4.69%	14.1%	127	40%						
7	6.276 - 11.231	B-	-	-	-	-	-	-	-	-	17	-	17	8.62%	18.5%	12	71%	-	-	-	-	-	-	-	-	-						
7.5	11.231 - 20.099	CCC+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8	20.099 - 35.967	CCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8.5	35.967 - 100	CCC-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9	100	CC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9.5	100	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10	100	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Total			23 771	4 024	3 111	30 906	0.05%	9.2%	746	2%	21 229	3 772	3 089	28 090	0.06%	9.2%	774	3%	22 319	3 711	2 867	28 897	0.05%	9.2%	659	2%						

Q4 2017											Q3 2017											Q2 2017										
Financial Institutions AIRB exposures by Internal PD grade											Financial Institutions AIRB exposures by Internal PD grade											Financial Institutions AIRB exposures by Internal PD grade										
Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)	EAD Amount			Average PD (%)	Average LGD (%)	RWA	Percentage RWA (%)									
			Drawn	Undrawn	Other					Drawn	Undrawn	Other					Drawn	Undrawn	Other													
1	0.000 - 0.035	AAA-, AA-	639	-	236	875	0.03%	44.8%	92	11%	569	-	252	821	0.03%	45.5%	95	12%	706	-	303	1 009	0.03%	39.6%	111	11%						
1.5	0.035 - 0.044	A+	499	-	1 572	2 071	0.04%	41.7%	170	8%	452	-	1 610	2 062	0.04%	40.1%	172	8%	433	-	1 515	1 948	0.04%	44.0%	159	8%						
2	0.044 - 0.063	A	416	-	79	495	0.05%	38.6%	77	16%	441	-	130	571	0.05%	38.5%	76	13%	371	-	330	701	0.05%	42.7%	109	16%						
2.5	0.063 - 0.103	A-	229	30	149	408	0.08%	49.0%	84	21%	308	30	158	496	0.08%	49.8%	104	21%	244	30	1 043	1 317	0.08%	36.4%	164	12%						
3	0.103 - 0.170	BBB+	46	-	151	197	0.13%	49.7%	54	27%	78	-	152	230	0.13%	49.9%	65	28%	115	-	201	316	0.13%	48.8%	88	28%						
3.5	0.170 - 0.280	BBB	1 727	-	14																											

AIRB Credit Risk Exposure - Back-Testing⁽¹⁾

	2018											
	Q3						Q2					
	Average estimated (PD %)	Actual default rate (%)	Average estimated (LGD %) ⁽²⁾	Actual (LGD %) ⁽³⁾	Estimated (EAD %) ⁽⁴⁾	Actual (EAD %) ⁽⁴⁾	Average estimated (PD %)	Actual default rate (%)	Average estimated (LGD %) ⁽²⁾	Actual (LGD %) ⁽³⁾	Estimated (EAD %) ⁽⁴⁾	Actual (EAD %) ⁽⁴⁾
(unaudited) (millions of Canadian dollars)												
Retail portfolio⁽⁵⁾												
Uninsured residential mortgages incl. Home equity line of credit ⁽⁶⁾	0,37%	0,26%	22,15%	11,08%	91,49%	84,43%	0,39%	0,24%	22,81%	12,17%	91,85%	84,85%
Insured residential mortgages ⁽⁷⁾	1,06%	0,62%	2,64%	na	na	na	1,12%	0,61%	2,64%	na	na	na
Qualifying revolving retail	1,26%	1,16%	77,45%	78,68%	99,24%	100,62%	1,28%	1,17%	71,01%	79,68%	99,52%	99,71%
Other retail	1,68%	1,30%	66,64%	58,90%	95,59%	88,62%	1,77%	1,31%	69,95%	63,37%	95,59%	89,17%
Wholesale & Sovereign portfolio⁽⁸⁾												
Corporate	1,27%	0,50%	37,11%	28,10%	77,64%	68,47%	1,26%	0,48%	37,49%	27,23%	83,64%	75,83%
Sovereign ⁽⁹⁾	0,06%	0,00%	11,54%	na	88,30%	na	0,06%	0,00%	11,54%	na	88,30%	na
Financial Institutions ⁽⁹⁾	0,59%	0,00%	40,75%	na	100,00%	na	0,56%	0,00%	40,75%	na	100,00%	na

	2018						2017					
	Q1						Q4					
	Average estimated (PD %)	Actual default rate (%)	Average estimated (LGD %) ⁽²⁾	Actual (LGD %) ⁽³⁾	Estimated (EAD %) ⁽⁴⁾	Actual (EAD %) ⁽⁴⁾	Average estimated (PD %)	Actual default rate (%)	Average estimated (LGD %) ⁽²⁾	Actual (LGD %) ⁽³⁾	Estimated (EAD %) ⁽⁴⁾	Actual (EAD %) ⁽⁴⁾
(unaudited) (millions of Canadian dollars)												
Retail portfolio⁽⁵⁾												
Uninsured residential mortgages incl. Home equity line of credit ⁽⁶⁾	0,39%	0,24%	22,90%	11,12%	90,99%	83,21%	0,39%	0,19%	25,69%	15,01%	98,75%	81,82%
Insured residential mortgages ⁽⁷⁾	1,20%	0,71%	2,65%	na	na	na	1,30%	0,75%	3,34%	na	na	na
Qualifying revolving retail	1,31%	1,19%	71,95%	82,05%	99,57%	99,15%	1,29%	1,20%	70,85%	79,60%	99,18%	98,33%
Other retail	1,78%	1,39%	70,31%	61,65%	95,66%	90,60%	1,80%	1,45%	70,43%	60,68%	96,00%	89,96%
Wholesale & Sovereign portfolio⁽⁸⁾												
Corporate	1,26%	0,45%	38,26%	27,94%	83,99%	82,90%	1,44%	0,37%	38,85%	25,07%	83,39%	80,03%
Sovereign ⁽⁹⁾	0,06%	0,00%	11,54%	na	88,30%	na	0,03%	0,00%	11,54%	na	88,30%	na
Financial Institutions ⁽⁹⁾	0,56%	0,00%	40,75%	na	100,00%	na	0,52%	0,00%	40,75%	na	100,00%	na

(1) Actual and estimated parameters are reported on a three-month lag. For example, for Q3 2018, estimated percentages are as of April 30th, 2017 and actual percentages reflect experience in the following 12 months.

(2) Estimated LGD reflects loss estimates under a downturn economic scenario and is based on defaulted accounts.

(3) Actual LGD includes indirect costs and discount rate and is based on defaulted accounts on which recovery process is completed.

(4) Estimated and actual EAD are computed for revolving products only and are based on defaulted accounts.

(5) Retail PD and EAD are based on account weighted average whilst retail LGD is based on exposure weighted average.

(6) Actual and estimated EAD for residential mortgage is computed only for Home equity lines of credit since the conventional residential mortgages are non-revolving.

(7) Actual LGD for insured residential mortgages is n/a to reflect the credit risk mitigation from government backed entities.

(8) Wholesale and Sovereign's PD is based on borrower weighted average whilst the LGD and EAD are based on facility weighted average.

(9) Actual LGD for the Financial Institutions and Sovereign are na because no defaulted facilities recovery were completed during the period. Actual EAD are na because no default was observed during the period.



Distribution of Gross Credit Risk Exposure (Non-Retail Portfolio by Industries)

2018																			
Q3							Q2						Q1						
EAD - Gross Exposure ⁽¹⁾																			
Non-Retail Portfolio	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	
Agriculture	4 657	327	6	–	–	4 990	4 338	417	6	–	–	4 761	4 156	268	7	–	–	4 431	
Oil and Gas	2 458	2 148	131	8	–	4 745	2 302	2 146	129	–	–	4 577	2 244	1 972	117	–	–	4 333	
Mining	808	838	120	–	–	1 766	764	861	120	–	–	1 745	385	833	45	–	–	1 263	
Utilities	2 905	1 866	720	–	1	5 492	2 544	1 964	677	–	1	5 186	2 604	1 848	601	–	–	5 053	
Construction ⁽²⁾	2 848	1 438	264	–	–	4 550	2 857	1 441	278	–	–	4 576	2 730	1 199	238	–	–	4 167	
Manufacturing	5 227	1 825	277	–	–	7 329	4 788	1 981	288	–	–	7 057	4 428	2 071	248	–	–	6 747	
Wholesale Trade	2 128	578	56	–	–	2 762	2 090	580	43	–	–	2 713	1 936	589	37	–	–	2 562	
Retail Trade	2 973	1 128	41	–	–	4 142	3 068	1 119	46	–	–	4 233	3 126	1 106	45	–	–	4 277	
Transportation	2 640	2 281	125	30	–	5 076	2 469	2 501	123	32	–	5 125	2 541	2 229	120	29	–	4 919	
Communications	1 627	646	194	–	–	2 467	1 567	778	193	–	–	2 538	1 408	832	190	–	–	2 430	
Finance and Insurance	25 243	3 295	846	104 241	447	134 072	23 236	3 494	601	104 181	810	132 322	22 533	3 222	597	99 228	1 175	126 755	
Real Estate ⁽³⁾	9 130	1 337	22	–	–	10 489	9 315	1 337	19	51	–	10 722	9 103	1 345	27	58	–	10 533	
Professional Services	1 365	653	345	–	–	2 363	1 315	653	360	–	–	2 328	1 210	661	360	–	–	2 231	
Education & Health Care	2 897	1 030	7	6	–	3 940	2 802	1 264	8	3	–	4 077	2 851	1 162	9	5	–	4 027	
Other Services	4 602	1 236	331	3	–	6 172	4 621	1 199	279	3	–	6 102	4 427	1 248	285	–	–	5 960	
Government	5 448	1 183	12	19 611	447	26 701	4 480	1 349	18	18 584	–	24 431	4 450	1 376	16	19 100	–	24 942	
Other	3 089	32	505	1 081	–	4 707	2 966	32	566	1 542	22	5 128	2 652	34	584	112	5	3 387	
Total – Non-retail ⁽⁴⁾	80 045	21 841	4 002	124 980	895	231 763	75 522	23 116	3 754	124 396	833	227 621	72 784	21 995	3 526	118 532	1 180	218 017	

2017																			
Q4							Q3						Q2						
EAD - Gross Exposure ⁽¹⁾																			
Non-Retail Portfolio	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	OTC Derivatives	Total	
Agriculture	4 017	310	6	–	–	4 333	3 895	314	8	–	–	4 217	3 741	299	8	–	–	4 048	
Oil and Gas	2 211	1 957	56	–	–	4 224	2 079	2 013	51	–	–	4 143	1 880	1 830	45	–	–	3 755	
Mining	411	817	52	–	–	1 280	439	723	46	–	–	1 208	414	680	47	–	–	1 141	
Utilities	2 723	1 737	515	–	–	4 975	3 036	1 579	479	–	–	5 094	2 543	1 656	465	–	–	4 664	
Construction ⁽²⁾	2 676	1 154	216	–	–	4 046	2 506	1 129	203	–	–	3 838	2 424	1 133	214	–	–	3 771	
Manufacturing	4 156	1 961	239	–	–	6 356	4 097	2 005	251	–	–	6 353	4 022	2 218	231	–	–	6 471	
Wholesale Trade	1 981	753	38	–	–	2 772	2 063	700	39	–	–	2 802	2 032	729	43	–	–	2 804	
Retail Trade	2 933	1 158	40	–	–	4 131	2 821	1 220	42	–	–	4 083	2 744	1 687	42	–	–	4 473	
Transportation	2 416	2 365	111	22	–	4 914	2 331	2 076	108	11	–	4 526	2 414	2 024	109	7	–	4 554	
Communications	1 555	810	207	–	–	2 572	1 629	699	260	–	–	2 588	1 497	811	259	–	–	2 567	
Finance and Insurance	23 780	2 289	838	89 876	671	117 454	21 690	2 023	794	75 819	783	101 109	21 698	2 014	886	82 368	748	107 714	
Real Estate ⁽³⁾	8 745	850	25	56	–	9 676	8 443	908	31	53	–	9 435	8 296	992	32	58	–	9 378	
Professional Services	1 232	565	414	–	–	2 211	1 193	566	389	–	–	2 148	1 385	902	312	–	2	2 601	
Education & Health Care	2 615	987	8	9	–	3 619	2 672	826	7	7	–	3 512	2 635	893	6	15	–	3 549	
Other Services	4 604	999	310	1	–	5 914	4 559	1 114	291	–	–	5 964	4 277	1 242	281	189	–	5 989	
Government	4 750	1 414	17	14 592	–	20 773	4 724	1 431	10	17 247	–	23 412	4 957	1 439	18	17 351	–	23 765	
Other	2 579	93	629	97	15	3 413	2 303	36	666	103	4	3 112	2 347	–	709	760	12	3 828	
Total – Non-retail ⁽⁴⁾	73 384	20 219	3 721	104 653	686	202 663	70 480	19 362	3 675	93 240	787	187 544	69 306	20 549	3 707	100 748	762	195 072	

(1) EAD amounts are after securitization and exclude trading related portfolio.

(2) Includes some public private partnership and project finance loans.

(3) Includes residential mortgages 5 units and more.

(4) This total excludes SME retail exposure.

Gross Credit Risk Exposure at Default in Europe ⁽¹⁾

		2018																
		Q3					Q2					Q1						
(unaudited) (millions of Canadian dollars)	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	49	14	6 135	3	-	6 201	66	-	6 232	10	-	6 308	-	-	4 467	4	-	4 471
Italy	-	-	200	-	1	201	-	-	100	-	1	101	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	1	-	-	3	40	44	2	-	-	1	47	50	-	-	-	7	46	53
Total GIIPS	50	14	6 335	6	41	6 446	68	-	6 332	11	48	6 459	-	-	4 467	11	46	4 524
France	13	41	1 300	2	250	1 606	31	43	1 326	207	243	1 850	147	34	768	206	315	1 470
Germany	140	59	-	8	37	244	141	64	-	7	41	253	-	-	-	2	37	39
United Kingdom	384	-	18 156	1 733	2	20 275	565	1	16 137	1 837	2	18 542	721	7	16 657	1 510	4	18 899
Other Europe	51	4	153	98	9	315	86	4	2 182	112	9	2 393	45	4	2 388	140	53	2 630
Total - Credit Risk	638	118	25 944	1 847	339	28 886	891	112	25 977	2 174	343	29 497	913	45	24 280	1 869	455	27 562

Adjustment to exposure for collateral	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total
Total - Net Credit Risk⁽⁴⁾	638	118	1 291	339	2 386	891	112	2 088	343	3 434	913	45	1 575	455	2 988

		2017																
		Q4					Q3					Q2						
(unaudited) (millions of Canadian dollars)	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	OTC derivatives	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	1	-	1 091	5	-	1 097	-	-	1 130	6	-	1 136	-	-	854	2	-	856
Italy	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	68	68	-	-	-	2	63	65	6	-	-	2	66	74
Total GIIPS	1	-	1 091	5	69	1 166	-	-	1 130	8	63	1 201	6	-	854	4	67	931
France	88	41	902	136	363	1 530	13	32	784	115	340	1 284	42	40	1 230	202	365	1 879
Germany	-	-	-	2	55	57	-	-	-	4	56	60	1	-	-	-	61	62
United Kingdom	302	5	13 891	950	4	15 152	257	5	13 415	1 109	5	14 791	216	6	14 228	1 122	4	15 576
Other Europe	54	-	2 917	108	3	3 082	36	-	1 502	116	7	1 661	42	-	2 403	130	16	2 591
Total - Credit Risk	445	46	18 801	1 201	494	20 987	306	37	16 831	1 352	471	18 997	307	46	18 715	1 458	513	21 039

Adjustment to exposure for collateral	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and OTC derivatives	Other off-balance sheet items ⁽³⁾	Total
Total - Net Credit Risk⁽⁴⁾	445	46	984	494	1 969	306	37	1 674	471	2 488	307	46	1 699	513	2 565

(1) Exposure at default is the expected gross exposure upon the default of an obligor. This amount is before any specific allowance or partial write-offs and does not reflect the impact of credit risk mitigation and collateral held. This table excludes Equity exposures.

(2) Represents securities purchased under reverse repurchase agreements and sold under repurchase agreements, and securities borrowed and loaned.

(3) Letters of guarantee and credit that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.

(4) For drawn, undrawn and Other off-balance sheet exposures, eligible financial collateral is taken into account in the Bank's Loss Given Default (LGD) models.

Formation of Gross Impaired Loans⁽¹⁾

(unaudited) (millions of Canadian dollars)

Formation of Gross Impaired Loans ⁽²⁾ (by sector)	IFRS 9			IAS 39								IFRS 9		IAS 39	
	2018			2017				2016				YTD		Full Year	
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	2018	2017	2017	2016
Balance at beginning	586	582	599	460	422	442	492	452	521	434	457	599	492	492	457
Write-offs															
Personal and Commercial															
Retail	(17)	(17)	(18)	(21)	(19)	(21)	(18)	(20)	(18)	(20)	(23)	(52)	(58)	(79)	(81)
Credit card	(24)	(25)	(25)									(74)			
Commercial	(10)	(8)	(37)	(58)	(2)	(33)	(10)	(19)	(66)	(5)	(20)	(55)	(45)	(103)	(110)
Wealth Management	(2)	(1)	(1)	(2)	(1)	(1)	(3)	(1)	(2)	(1)	(2)	(4)	(5)	(7)	(6)
Financial Markets	-	-	-	(5)	-	-	-	-	-	-	-	-	-	(5)	-
U.S. Specialty Finance and International															
Credigy	(35)	(33)	(25)	-	-	-	-	-	-	-	-	(93)	-	-	-
ABA Bank ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total write-offs	(88)	(84)	(106)	(86)	(22)	(55)	(31)	(40)	(86)	(26)	(45)	(278)	(108)	(194)	(197)
Formation															
Personal and Commercial															
Retail	19	11	23	17	13	18	23	17	11	21	23	53	54	71	72
Credit card	24	25	25									74			
Commercial	48	30	8	(5)	36	14	(43)	60	6	89	(5)	86	7	2	150
Wealth Management	1	2	2	2	1	1	-	2	(1)	3	4	5	2	4	8
Financial Markets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S. Specialty Finance and International															
Credigy	36	20	27	-	-	-	-	-	-	-	-	83	-	-	-
ABA Bank ⁽³⁾	4	-	4	(8)	10	2	1	1	1	-	-	8	13	5	2
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total formation	132	88	89	6	60	35	(19)	80	17	113	22	309	76	82	232
Balance at end	630	586	582	380	460	422	442	492	452	521	434	630	460	380	492

Formation of Gross Impaired Loans ⁽²⁾ (by activity)	IFRS 9			IAS 39								IFRS 9		IAS 39	
	2018			2017				2016				YTD		Full Year	
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	2018	2017	2017	2016
Balance at beginning	586	582	599	460	422	442	492	452	521	434	457	599	492	492	457
Classified as credit-impaired during the period	214	231	227	132	159	192	79	190	204	211	145	672	430	562	750
Transferred to performing loans during the period	(45)	(27)	(25)	(4)	(4)	(5)	(5)	(4)	(6)	(6)	(3)	(97)	(14)	(18)	(19)
Net repayments	(38)	(103)	(105)	(86)	(60)	(121)	(60)	(80)	(158)	(66)	(91)	(246)	(241)	(327)	(395)
Disposals of loans	-	(15)	-	-	-	-	-	-	-	-	-	(15)	-	-	-
Write-offs	(88)	(84)	(106)	(126)	(57)	(87)	(61)	(66)	(110)	(50)	(68)	(278)	(205)	(331)	(294)
Recoveries of loans previously written off	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exchange and other movements	1	2	(8)	4	-	1	(3)	-	1	(2)	(6)	(5)	(2)	2	(7)
Balance at end	630	586	582	380	460	422	442	492	452	521	434	630	460	380	492

(1) Given the adoption of IFRS 9, impaired loans are all loans classified in stage 3 of the expected credit loss model. Under IAS 39, loans were considered impaired according to different criteria.

(2) Including acceptances and excluding POCI loans.

(3) The Bank completed the acquisition of Advanced Bank of Asia Limited (ABA Bank) during the third quarter of 2016.



Gross Credit Exposure by Residual Contractual Maturity⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018											
	Q3				Q2				Q1			
	Within 1 year	1 to 5 years	Over 5 years	Total	Within 1 year	1 to 5 years	Over 5 years	Total	Within 1 year	1 to 5 years	Over 5 years	Total
Retail												
Residential mortgages	30 735	18 730	255	49 720	29 510	17 661	267	47 438	29 240	17 218	253	46 711
Qualifying revolving retail	6 283	-	-	6 283	6 130	-	-	6 130	6 070	-	-	6 070
Other retail	5 229	3 227	2 578	11 034	5 249	3 206	2 507	10 962	5 267	3 050	2 479	10 796
	42 247	21 957	2 833	67 037	40 889	20 867	2 774	64 530	40 577	20 268	2 732	63 577
Non-retail												
Corporate	57 376	22 787	2 256	82 419	55 864	23 072	2 348	81 284	54 213	21 637	2 194	78 044
Sovereign	51 178	16 386	3 717	71 281	55 678	14 878	3 464	74 020	54 311	15 319	3 882	73 512
Financial Institutions	69 621	716	33	70 370	63 623	2 105	59	65 787	56 849	2 142	36	59 027
	178 175	39 889	6 006	224 070	175 165	40 055	5 871	221 091	165 373	39 098	6 112	210 583
Trading book	1 742	4 832	1 585	8 159	2 058	4 721	1 704	8 483	2 056	5 546	1 851	9 453
Total	222 164	66 678	10 424	299 266	218 112	65 643	10 349	294 104	208 006	64 912	10 695	283 613

(unaudited) (millions of Canadian dollars)	2017											
	Q4				Q3				Q2			
	Within 1 year	1 to 5 years	Over 5 years	Total	Within 1 year	1 to 5 years	Over 5 years	Total	Within 1 year	1 to 5 years	Over 5 years	Total
Retail												
Residential mortgages	29 363	16 942	298	46 603	27 830	16 658	308	44 796	26 504	15 725	264	42 493
Qualifying revolving retail	6 196	-	-	6 196	6 027	-	-	6 027	5 844	-	-	5 844
Other retail	5 269	2 982	2 459	10 710	5 334	2 932	2 419	10 685	5 279	2 941	2 280	10 500
	40 828	19 924	2 757	63 509	39 191	19 590	2 727	61 508	37 627	18 666	2 544	58 837
Non-retail												
Corporate	50 772	20 888	2 004	73 664	48 987	19 784	1 719	70 490	48 010	20 811	1 812	70 633
Sovereign	45 631	13 601	4 309	63 541	41 397	13 067	4 270	58 734	43 626	13 043	4 874	61 543
Financial Institutions	55 450	2 466	30	57 946	50 184	2 535	31	52 750	56 265	881	39	57 185
	151 853	36 955	6 343	195 151	140 568	35 386	6 020	181 974	147 901	34 735	6 725	189 361
Trading book	1 420	4 884	1 827	8 131	1 439	4 793	1 811	8 043	1 589	4 439	2 888	8 916
Total	194 101	61 763	10 927	266 791	181 198	59 769	10 558	251 525	187 117	57 840	12 157	257 114

(1) Gross credit exposure is the expected exposure upon the default of an obligor before any specific allowances or credit risk mitigation.



Credit Risk Mitigation - Guarantees and Credit Derivatives

(unaudited) (millions of Canadian dollars)	2018					
	Q3		Q2		Q1	
Total exposure covered by:	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾
Retail						
Residential mortgage	273	2 682	323	1 969	334	2 176
Qualifying revolving retail	-	-	-	-	-	-
Other retail	2 778	177	2 866	172	2 770	178
	3 051	2 859	3 189	2 141	3 104	2 354
Non-retail						
Corporate	873	2 570	726	2 511	889	2 003
Sovereign	-	-	-	-	-	-
Financial Institutions	-	13	-	48	-	63
	873	2 583	726	2 559	889	2 066
Trading book	-	40	-	41	-	61
Total	3 924	5 482	3 915	4 741	3 993	4 481

(unaudited) (millions of Canadian dollars)	2017					
	Q4		Q3		Q2	
Total exposure covered by:	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾
Retail						
Residential mortgage	288	2 707	462	3 387	295	2 497
Qualifying revolving retail	-	-	-	-	-	-
Other retail	2 782	181	2 640	186	2 633	189
	3 070	2 888	3 102	3 573	2 928	2 686
Non-retail						
Corporate	861	2 012	986	1 984	1 162	2 042
Sovereign	-	-	-	-	-	-
Financial Institutions	-	112	-	115	-	6
	861	2 124	986	2 099	1 162	2 048
Trading book	-	43	-	93	-	7
Total	3 931	5 055	4 088	5 765	4 090	4 741

(1) No eligible financial collateral.

(2) For exposures under the AIRB approach, eligible financial collateral is taken into account in the Bank's Loss Given Default (LGD) models. Separate disclosure of eligible financial collateral is, therefore, not required.



Banking Book Equity

(unaudited)
(millions of Canadian dollars)

	2018											
	Q3				Q2				Q1			
	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)
Public	486	–	486	129	528	–	528	112	515	–	515	96
Private	491	44	447	54	449	34	415	46	397	36	361	41
	977	44	933	183	977	34	943	158	912	36	876	137

(unaudited)
(millions of Canadian dollars)

	2017											
	Q4				Q3				Q2			
	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)	Total exposures	Unfunded commitments	On balance sheet exposures at carrying value	Gross unrealized gains (losses)
Public	529	–	529	89	524	–	524	77	522	–	522	139
Private	381	39	342	44	408	38	370	66	350	37	313	79
	910	39	871	133	932	38	894	143	872	37	835	218



Credit Derivative Positions (notional amounts)

2018												
	Q3				Q2				Q1			
	Credit portfolio ⁽¹⁾		Trading		Credit portfolio ⁽¹⁾		Trading		Credit portfolio ⁽¹⁾		Trading	
	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold
(unaudited) (millions of Canadian dollars)												
Credit default swaps												
Indices, singles names and other	56	20	1 988	156	81	19	2 018	198	76	18	1 493	65
Tranches on indices	-	-	-	-	-	-	-	-	-	-	-	-
Total return swaps	-	-	171	-	-	-	173	-	-	-	179	-
Credit options	-	-	-	-	-	-	-	-	-	-	-	-

2017												
	Q4				Q3				Q2			
	Credit portfolio ⁽¹⁾		Trading		Credit portfolio ⁽¹⁾		Trading		Credit portfolio ⁽¹⁾		Trading	
	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold
(unaudited) (millions of Canadian dollars)												
Credit default swaps												
Indices, singles names and other	80	19	4 748	3 514	77	19	3 089	2 076	132	20	2 419	2 127
Tranches on indices	-	-	-	-	-	-	-	-	-	-	-	-
Total return swaps	-	-	180	-	-	-	208	-	-	-	217	-
Credit options	-	-	-	-	-	-	-	-	-	-	-	-

(1) Protection sold solely for the purpose of reducing protection purchased.



Derivatives Financial Instruments According to Basel Definition

	2018			2017			
	Q3	Q2	Q1	Q4	Q3	Q2	Q1
	Under Basel III						
(unaudited) (millions of Canadian dollars)							
Foreign Exchange Related Contracts							
Swaps	209 335	203 973	182 228	182 196	180 440	182 943	182 895
Options							
- purchased	7 664	9 324	7 258	8 515	7 385	7 105	6 883
- sold	8 016	8 055	6 532	8 940	7 689	7 809	6 698
Exchange traded and OTC futures contracts	29 495	30 853	29 000	29 509	28 518	29 554	31 777
Total notional amount	254 510	252 205	225 018	229 160	224 032	227 411	228 253
Replacement cost							
- gross	3 308	3 586	4 515	3 368	5 831	4 211	4 248
- net ⁽¹⁾	1 804	2 181	2 302	2 512	2 659	2 710	2 347
Future credit risk	1 863	1 995	1 895	1 892	1 817	1 933	2 009
Credit equivalent ⁽²⁾	3 667	4 176	4 197	4 404	4 476	4 643	4 356
Risk-weighted equivalent ⁽³⁾	1 169	1 456	1 388	1 374	1 448	1 284	1 247
Interest Rate Related Contracts							
Swaps	519 116	487 593	460 603	503 421	473 530	421 548	436 095
Options							
- purchased	39 281	30 577	28 113	20 747	13 016	18 743	18 834
- sold	22 510	14 488	10 350	5 044	5 620	14 600	21 887
Exchange traded and OTC futures contracts	5 201	4 958	5 269	4 733	9 705	6 816	14 899
Total notional amount	586 108	537 616	504 335	533 945	501 871	461 707	491 715
Replacement cost							
- gross	5 285	5 127	4 538	3 705	4 066	4 506	4 353
- net ⁽¹⁾	2 128	1 987	1 548	1 012	1 027	1 237	1 153
Future credit risk	1 841	1 859	3 318	2 395	2 438	2 519	2 373
Credit equivalent ⁽²⁾	3 969	3 846	4 866	3 407	3 465	3 755	3 526
Risk-weighted equivalent ⁽³⁾	359	405	566	620	610	754	723
Financial Futures							
Total notional amount	80 369	86 407	90 467	122 714	72 600	125 581	111 574
Equity and Commodity Contracts							
Total notional amount	63 930	64 736	69 357	53 923	50 390	54 851	49 932
Replacement cost							
- gross	2 518	2 565	2 484	1 908	1 870	1 878	2 641
- net ⁽¹⁾	1 854	1 906	1 937	1 441	1 566	1 567	2 176
Future credit risk	2 745	2 817	2 889	2 314	2 227	2 505	2 194
Credit equivalent ⁽²⁾	4 599	4 723	4 826	3 755	3 793	4 072	4 370
Risk-weighted equivalent ⁽³⁾	472	467	442	306	250	298	368
Credit Derivatives							
Total notional amount (trading only) ⁽⁵⁾	2 315	2 389	1 737	8 442	5 373	4 763	2 585
Total Return Swap Notional Amount ⁽⁴⁾⁽⁵⁾	171	173	191	150	192	349	6
Replacement cost ⁽⁵⁾							
- gross	13	10	11	111	75	68	35
- net ⁽¹⁾	6	7	9	8	7	5	9
Future credit risk	13	13	15	16	21	21	30
Credit equivalent ⁽²⁾	19	20	24	24	28	27	39
Risk-weighted equivalent ⁽³⁾	46	44	2	7	4	5	6
Total Derivatives							
Total notional amount	987 403	943 526	891 105	948 334	854 458	874 662	884 065
Replacement cost							
- gross	11 124	11 288	11 548	10 092	11 842	10 663	11 277
- net ⁽¹⁾	5 792	6 081	5 796	4 973	5 259	5 519	5 685
Future credit risk	6 462	6 684	8 117	6 617	6 584	6 978	6 606
Credit equivalent ⁽²⁾	12 254	12 765	13 913	11 590	11 762	12 497	12 291
Risk-weighted equivalent ⁽³⁾	2 046	2 372	2 398	2 307	2 312	2 341	2 344

(1) Net replacement cost is gross positive replacement cost with consideration of master netting agreements without consideration of collateral.

(2) Includes the impact of master netting agreements but excludes collateral.

(3) Risk weighted amounts reported are net of impact of collaterals and master netting agreements.

(4) Securitised exposure recognized for capital ratio but not for consolidated balance sheet purposes due to IFRS standards.

(5) Trading Credit Derivatives only.



Over The Counter Derivatives Financial Instruments Settled by Central Counterparties⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018								
	Q3			Q2			Q1		
	Exchange-traded contracts	OTC-Traded		Exchange-traded contracts	OTC-Traded		Exchange-traded contracts	OTC-Traded	
		Settled by central counterparties	Not settled by central counterparties		Settled by central counterparties	Not settled by central counterparties		Settled by central counterparties	Not settled by central counterparties
Interest rate contracts	104 705	375 829	185 943	117 926	349 366	156 731	122 334	316 141	156 327
Foreign exchange contracts	540	–	253 970	153	–	252 052	351	–	224 667
Equity, commodity and credit derivative contracts ⁽²⁾	19 345	2 734	44 337	21 586	2 418	43 294	22 715	2 148	46 422

(unaudited) (millions of Canadian dollars)	2017								
	Q4			Q3			Q2		
	Exchange-traded contracts	OTC-Traded		Exchange-traded contracts	OTC-Traded		Exchange-traded contracts	OTC-Traded	
		Settled by central counterparties	Not settled by central counterparties		Settled by central counterparties	Not settled by central counterparties		Settled by central counterparties	Not settled by central counterparties
Interest rate contracts	143 394	359 969	153 296	83 753	333 309	157 408	149 009	280 124	158 156
Foreign exchange contracts	153	–	229 007	194	–	223 838	91	–	227 319
Equity, commodity and credit derivative contracts ⁽²⁾	21 188	8 893	32 434	22 658	5 703	27 595	21 868	5 094	33 001

(1) Notional amounts.

(2) Credit derivative contracts in non-trading book are excluded.

Aggregate Amount of Securitization Exposures

(unaudited) (millions of Canadian dollars)	2018									2017								
	Q3			Q2			Q1			Q4			Q3			Q2		
	Banking Book		Trading book	Banking Book		Trading book	Banking Book		Trading book	Banking Book		Trading book	Banking Book		Trading book	Banking Book		Trading book
	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet
Bank's own assets																		
Traditional exposures																		
Insured Mortgage loans																		
Retained ⁽¹⁾	6 372	-	2 733	6 847	-	2 646	7 131	-	1 593	6 693	-	3 456	6 579	-	3 264	7 589	-	3 460
Credit Cards																		
Retained ⁽¹⁾	167	332	-	140	286	-	144	298	-	191	381	-	195	389	-	192	383	-
Purchased ⁽²⁾	478	-	-	478	-	-	479	-	-	480	-	-	479	-	-	481	-	-
Total - Bank's own assets	7 017	332	2 733	7 465	286	2 646	7 754	298	1 593	7 364	381	3 456	7 253	389	3 264	8 262	383	3 460
Third party assets																		
Sponsored																		
Traditional exposures ⁽³⁾																		
Residential Mortgages - Insured	-	623	3	-	723	1	-	833	-	-	1 014	2	-	1 579	-	-	1 634	-
Residential Mortgages - conventional	-	1 370	7	-	1 360	1	-	1 248	-	-	1 129	2	-	862	-	-	671	-
Fleet Lease Receivables	-	268	1	-	270	-	-	267	-	-	250	1	-	251	-	-	252	-
Auto Floorplans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Auto Loans	-	128	1	-	130	-	-	131	-	-	128	-	-	128	-	-	132	-
Investment Loans	-	200	1	-	201	-	-	201	-	-	200	-	-	200	-	-	-	-
Purchased																		
Traditional exposures																		
Insured Mortgage loans - MBS	11 399	-	6 195	10 534	-	5 637	7 564	-	9 969	9 608	-	6 224	8 850	-	5 005	9 096	-	6 019
Credit Cards - ABS	-	-	81	-	-	105	-	-	121	-	-	122	-	-	86	-	-	70
Home Equity - ABS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial mortgage back securities (CMBS)	15	-	-	16	-	-	7	-	-	18	-	-	18	-	-	19	-	-
Collateralized debt obligation (CDO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Collateralized mortgage obligation (CMO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	1 410	288	-	1 356	482	-	1 359	486	-	1 306	216	-	1 439	193	-	1 422	225	-
Synthetic exposures																		
CDX tranches	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Resecuritized exposures																		
Master Asset Vehicles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial paper not included in the Pan-Canadian restructuring plan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Collateralized mortgage obligation (CMO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total - Third party assets	12 824	2 877	6 289	11 906	3 166	5 744	8 930	3 166	10 090	10 932	2 937	6 351	10 307	3 213	5 091	10 537	2 914	6 089
Total - Bank	19 841	3 209	9 022	19 371	3 452	8 390	16 684	3 464	11 683	18 296	3 318	9 807	17 560	3 602	8 355	18 799	3 297	9 549

(1) The Retained exposures for insured mortgage loans and credit card receivables are treated under the AIRB Framework as if they remained on the Bank's balance sheet.

(2) The credit card receivable purchased held from Bank's own assets securitization represent the Bank's interest in investment grade subordinated notes issued.

(3) Sponsored Traditional exposures comprise Bank's committed amount to the Fusion Trust and Clarity Trust liquidity facility lines as well as the Bank's purchased note of Fusion Trust and Clarity Trust.

Capital Requirements for Securitization Exposures Under Securitization Framework⁽¹⁾

(unaudited) (millions of Canadian dollars)	2018																	
	Q3						Q2						Q1					
	Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book			
	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet		
Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	
Bank's own assets⁽²⁾																		
Credit Cards																		
Seller's interest exposure ⁽³⁾	167	100	332	43	--	--	139	86	286	37	--	--	144	92	298	38	--	--
Purchased	478	54	--	--	--	--	478	54	--	--	--	--	479	54	--	--	--	--
Total - Bank's own assets	645	154	332	43	--	--	617	140	286	37	--	--	623	146	298	38	--	--
Third party assets																		
Securitized																		
7% - 30%	1 425	134	2 877	205	81	6	1 373	129	3 166	226	105	8	1 366	128	3 166	226	121	9
35% - 100%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
150% - 850%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1250 %	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Home Equity - ABS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Collateralized mortgage obligation (CMO)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Others	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Resecuritized																		
7% - 30%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
35% - 100%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
150% - 850%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1250 %	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Master Asset Vehicles	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial paper not included in the	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pan-Canadian restructuring plan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Collateralized mortgage obligation (CMO)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total - Third party assets	1 425	134	2 877	205	81	6	1 373	129	3 166	226	105	8	1 366	128	3 166	226	121	9
Total	2 070	288	3 209	248	81	6	1 990	269	3 452	263	105	8	1 989	274	3 464	264	121	9

(unaudited) (millions of Canadian dollars)	2017																	
	Q4						Q3						Q2					
	Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book			
	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet	On balance sheet	Off balance sheet		
Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	Exposure Amount	Risk-Weighted Assets	
Bank's own assets⁽²⁾																		
Credit Cards																		
Seller's interest exposure ⁽³⁾	191	119	381	52	--	--	195	119	389	51	--	--	192	120	383	51	--	--
Purchased	480	55	--	--	--	--	479	55	--	--	--	--	481	55	--	--	--	--
Total - Bank's own assets	671	174	381	52	--	--	674	174	389	51	--	--	673	175	383	51	--	--
Third party assets																		
Securitized																		
7% - 30%	1 324	124	2 937	211	122	9	1 457	141	3 213	228	86	61	1 441	139	2 914	204	70	49
35% - 100%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
150% - 850%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1250 %	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Home Equity - ABS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Collateralized mortgage obligation (CMO)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Others	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Resecuritized																		
7% - 30%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
35% - 100%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
150% - 850%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1250 %	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Master Asset Vehicles	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial paper not included in the	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pan-Canadian restructuring plan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Collateralized mortgage obligation (CMO)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total - Third party assets	1 324	124	2 937	211	122	9	1 457	141	3 213	228	86	61	1 441	139	2 914	204	70	49
Total	1 995	298	3 318	263	122	9	2 131	315	3 602	279	86	61	2 114	314	3 297	255	70	49

(1) National Bank uses the following approaches for determining the risk-weighted assets : RBA, IAA and, starting Q2 2017, the Supervisory Formula.

(2) Since inception, no capital has been assessed for the Bank's early amortization provisions associated with the securitized credit cards portfolio because the excess spread of the underlying portfolio has remained above the threshold for which capital charge would be incurred.

(3) Seller's interest exposure are treated under AIRB Approach.

Asset Securitization - Managed Loans

		2018														
		Q3					Q2					Q1				
		Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized	Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized	Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized
(unaudited) (millions of Canadian dollars)																
Banking Book																
Insured mortgage loans		20 530	–	–	1 358	–	21 313	–	–	1 204	–	21 372	–	–	1 828	–
Credit card receivables		1 389	9	12	–	–	1 389	10	13	–	–	1 389	9	12	–	–
Total		21 919	9	12	1 358	–	22 702	10	13	1 204	–	22 761	9	12	1 828	–
Trading Book																
Insured mortgage loans		5 204	–	–	296	214	5 265	–	–	189	228	5 198	–	–	148	207

		2017														
		Q4					Q3					Q2				
		Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized	Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized	Total gross loans ⁽¹⁾	Gross impaired loans and other past due loans ⁽²⁾	Net write-offs	Securitization activities for the quarter ended	Exposure amount intended to be securitized
(unaudited) (millions of Canadian dollars)																
Banking Book																
Insured mortgage loans		20 962	–	–	1 930	–	20 684	–	–	1 051	–	21 640	–	–	1 805	–
Credit card receivables		1 389	9	12	–	–	1 389	9	13	–	–	1 389	9	13	–	–
Total		22 351	9	12	1 930	–	22 073	9	13	1 051	–	23 029	9	13	1 805	–
Trading Book																
Insured mortgage loans		5 475	–	–	155	153	5 652	–	–	107	374	5 844	–	–	118	151

(1) Notional amount.

(2) Comprises impaired loans and fully secured loans that are 90 days or more past due and for which, in the opinion of management, there is reasonable assurance that principal and interest will ultimately be collected.
Credit card receivables are not classified as impaired loans but, instead, are written off when payments are 180 days in arrears.



Glossary

Advanced Internal Ratings-Based (AIRB) approach	See risk-weighted assets below.
Banking Book Equities	Banking book equities comprise mainly exposures held for strategic and other reasons.
Capital Ratio	The Bank's capital divided by risk-weighted assets. The Bank's capital can be either CET1 Capital, Tier 1 capital or Total capital, producing three different capital ratios.
Common Equity Tier 1 (CET1) capital	Common Equity Tier 1 capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. Common Equity Tier 1 capital ratio is calculated by dividing Common Equity Tier 1 capital by risk-weighted assets.
Corporate	All direct credit risk exposures to corporations, partnerships and proprietorships, exposures guaranteed by those entities.
Credit Risk	Credit risk is the risk of a financial loss if an obligor does not fully honour its contractual commitments to the Bank. Obligors may be borrowers, issuers, counterparties or guarantors. Credit risk is the most significant risk facing the Bank in the normal course of business. The Bank is exposed to credit risk not only through its direct lending activities and transactions but also through commitments to extend credit, letters of guarantee, letters of credit, over-the-counter derivatives trading, available-for-sale debt securities, securities purchased under reverse repurchase agreements, deposits with financial institutions, brokerage activities and transactions carrying a settlement risk for the Bank such as irrevocable fund transfers to third parties via electronic payment systems.
Drawn exposure	The amount of credit risk exposure resulting from loans already advanced to the customer.
Exposure at default (EAD)	An estimate of the amount of exposure to a customer at the event of, and at the time of, default.
Financial Institutions	All direct credit risk exposures to deposit-taking institutions and regulated securities firms, and exposures guaranteed by those entities.
Leverage ratio	The leverage ratio is calculated by dividing the amount of Tier 1 capital by the total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative exposures and securities financing transaction exposures) and off-balance-sheet items. Assets deducted from Tier 1 capital are also deducted from the total exposure.
Loss given default (LGD)	An estimate of the amount of exposure to a customer that will not be recovered following a default by that customer, expressed as a percentage of the exposure at default.
Market risk	Market risk is the risk of financial loss resulting from adverse movements in underlying market factors. Market risk at the Bank arises from its participation in market-making, trading, investment and asset/liability management activities.
Operational risk	Operational risk is the risk of loss resulting from an inadequacy or a failure ascribable to people, processes, technology or external events. Operational risks are present in every activity of the Bank. Theft, fraud, unauthorized transactions, system errors, human error, amendments to or misinterpretation of acts and regulations, litigation or disputes with clients or property damage are just a few examples of events likely to cause financial loss, harm the Bank's reputation or result in regulatory penalties or sanctions.
Other off-balance sheet	Letters of guarantee, documentary letters of credit and securitized assets that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.
Other retail	This exposure class includes consumer loans, SME credit card receivables, SME loans (excluding mortgages of five units or more), and other personal loans.
Over-the-counter derivatives (OTC)	The amount of credit risk exposure resulting from derivatives that trade directly between two counterparties, rather than through exchanges.
Probability of default (PD)	An estimate of the likelihood of default for any particular customer which occurs when that customer is not able to repay its obligations as they become contractually due.
Qualifying revolving retail (QRR)	This exposure class includes lines of credit and credit card receivables.
Repo-style transactions	Financial obligations related to securities sold (repos) or repurchased (reverse repos) pursuant to an agreement under which the securities will be repurchased (repos) or resold (reverse repos) on a specified date and at a specified price. Such an agreement is a form of short-term funding (repos) or collateralized lending (reverse repos). Repo-style transactions also include loaned and borrowed securities that are off-balance sheet.
Retail Residential Mortgage	This exposure class includes loans to individuals against residential property (four units or less) and lines of credit secured by equity in residential property (HELOC).
Risk-weighted assets (RWA)	Assets are risk weighted according to the guidelines established by the Office of the Superintendent of Financial Institutions. In the standardized calculation approach, factors are applied to the face value of certain assets in order to reflect comparable risk levels. In the advanced approach, risk-weighted assets are derived from the Bank's internal models which represents the Bank's own assessment of the risks it incurs. Off-balance sheet instruments are converted to balance sheet (or credit) equivalents by adjusting the notional values before applying the appropriate risk-weighting factors.
Scaling Factor	An add-on of 6% is applied as a calibration adjustment to the risk weighted assets amount for credit risk assessed under the AIRB approach.
Sovereign	All direct credit risk exposures to governments, central banks and certain public sector entities, and exposures guaranteed by those entities.
Standardized approach	See risk-weighted assets.
Tier 1 capital	Tier 1 capital ratio consists of Common Equity Tier 1 capital and Additional Tier 1 instruments, namely, eligible non-cumulative preferred shares and the eligible amount of innovative instruments. Tier 1 capital ratio is calculated by dividing Tier 1 capital by risk-weighted assets.
Tier 2 capital	Tier 2 capital is mainly comprised of subordinated debentures and the collective allowance.
Total capital	Total capital is the sum of Tier 1 and Tier 2 capital. Total capital ratio is calculated by dividing total capital, less adjustments or regulatory deductions, by risk-weighted assets.
Undrawn commitments	The amount of credit risk exposure resulting from loans that have not been advanced to a customer, but which a customer may be entitled to draw in the future.