



SUPPLEMENTARY REGULATORY CAPITAL DISCLOSURE

FOURTH QUARTER 2017

(unaudited)

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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 2017 and also in the document entitled *Supplementary Financial Information* which is available on the Bank's website at nbc.ca.



Table of Contents

Pilar 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 and Allowance for Credit Losses	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⁾

	(unaudited) (millions of Canadian dollars)	Reference ⁽²⁾	2017				2016			
			Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
			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'	2 826	2 874	2 850	2 820	2 718	2 663	2 689	2 691
2 Retained earnings		b	7 706	7 540	7 164	7 065	6 706	6 683	6 530	6 593
3 Accumulated other comprehensive income and other reserves		c	168	122	221	173	218	217	145	91
5 Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)		d	8	7	7	7	7	7	—	—
6 Common Equity Tier 1 capital before regulatory adjustments			10 708	10 543	10 242	10 065	9 649	9 570	9 364	9 375
Regulatory adjustments to Common Equity Tier 1 capital										
8 Goodwill (net of related tax liability)		e	1 668	1 660	1 677	1 662	1 669	1 661	1 545	1 557
9 Intangible assets other than mortgage-servicing rights		f - x	1 067	1 032	1 016	997	985	977	954	898
11 Accumulated other comprehensive income related to cash flow hedges		h	146	136	91	131	135	165	160	124
12 Shortfall of total provisions to expected losses		i	—	—	—	—	—	—	—	12
14 Gains (losses) due to changes in own credit risk on fair valued liabilities		j	(39)	(32)	(25)	(17)	(14)	(2)	(1)	28
15 Defined benefit pension plan assets (net of related tax liability)		k - y	4	14	7	18	7	8	30	13
16 Investments in own shares (if not already netted off contributed surplus on reported balance sheet)			6	—	6	6	2	3	7	—
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			2 852	2 810	2 772	2 797	2 784	2 812	2 695	2 632
29 Common Equity Tier 1 capital (CET1)			7 856	7 733	7 470	7 268	6 865	6 758	6 669	6 743
Additional Tier 1 capital: instruments										
30 Directly issued qualifying Additional Tier 1 instruments plus related contributed surplus ⁽³⁾		v	1 850	1 850	1 450	1 450	1 450	1 450	1 050	1 050
31 of which: classified as equity under applicable accounting standards		v + z	1 850	1 850	1 450	1 450	1 450	1 450	1 050	1 050
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'	750	950	950	950	950	950	1 162	1 161
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	1	1	1	—	—
36 Additional Tier 1 capital before regulatory adjustments			2 602	2 802	2 402	2 401	2 401	2 401	2 212	2 211
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	—						
44 Additional Tier 1 capital (AT1)			2 601	2 801	2 401	2 400	2 400	2 400	2 211	2 211
45 Tier 1 capital (T1 = CET1 + AT1)			10 457	10 534	9 871	9 668	9 265	9 158	8 880	8 954
Tier 2 capital: instruments and provisions										
47 Directly issued capital instruments subject to phase out from Tier 2 ⁽³⁾		r'	9	9	10	1 009	1 009	1 009	1 009	1 010
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	2	2	2	2	2	2	—	—
50 Allowances on loans ⁽⁵⁾		t	193	210	204	234	230	236	275	33
51 Tier 2 capital before regulatory adjustments			204	221	216	1 245	1 241	1 247	1 284	1 043
Tier 2 capital: regulatory adjustments										
57 Total regulatory adjustments to Tier 2 capital			—	—						
58 Tier 2 capital (T2)			204	221	216	1 245	1 241	1 247	1 284	1 043
59 Total capital (TC = T1 + T2)			10 661	10 755	10 087	10 913	10 506	10 405	10 164	9 997

(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.

(5) During the second quarter of 2016, a \$250 million (\$183 million net of income taxes) sectoral provision for credit losses was recorded for producers and service companies in the oil and gas sector.

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

		2017				2016			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
		All-in basis							
(unaudited) (millions of Canadian dollars)									
60a	Common Equity Tier 1 Capital RWA (CET1)	70 173	69 156	69 383	68 574	68 205	68 530	68 375	69 741
60b	Tier 1 Capital RWA	70 327	69 289	69 533	68 715	68 430	68 765	68 604	70 006
60c	Total capital RWA	70 451	69 396	69 653	68 828	68 623	68 966	68 800	70 233
Capital ratios									
61	Common Equity Tier 1 (as a percentage of risk weighted assets)	11,2%	11,2%	10,8%	10,6%	10,1%	9,9%	9,8%	9,7%
62	Tier 1 (as a percentage of risk weighted assets) ⁽²⁾	14,9%	15,2%	14,2%	14,1%	13,5%	13,3%	12,9%	12,8%
63	Total capital (as a percentage of risk weighted assets) ⁽²⁾	15,1%	15,5%	14,5%	15,9%	15,3%	15,1%	14,8%	14,2%
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% na	8,0% na	8,0% na	8,0% na	8,0% na	8,0% na	8,0% na	8,0% na
67	of which: G-SIB buffer requirement	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%
67a	of which: D-SIBs buffer requirement								
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk weighted assets)	11,2%	11,2%	10,8%	10,6%	10,1%	9,9%	9,8%	9,7%
OSFI all-in target									
69	Common Equity Tier 1 all-in target ratio	8,0%	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%	9,5%
71	Total capital all-in target ratio	11,5%	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	466	459	317	232	238	234	255	198
73	Significant investments in the common stock of financial institutions	221	237	238	257	245	229	278	321
75	Deferred tax assets arising from temporary differences (net of related tax liabilities)	54	31	61	22	54	31	24	467
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)	59	60	55	58	62	65	51	33
77	Cap on inclusion of allowances in Tier 2 under standardised approach	79	77	72	72	78	81	58	66
78	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap) ⁽³⁾	134	150	149	175	167	171	224	—
79	Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	309	304	312	301	305	304	310	317
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	968	968	968	968	1 162	1 162	1 162	1 162
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	1 191	1 191	1 191	1 191	1 429	1 429	1 429	1 429
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	—	—	—	—	—	—	—	—
Transitional Capital Disclosure Template									
29	Common Equity Tier 1 capital (CET1)	8 404	8 284	8 009	7 809	7 928	7 819	7 710	7 769
45	Tier 1 capital (T1 = CET1 + AT1)	10 668	10 741	10 074	9 876	9 660	9 554	9 296	9 355
59	Total capital (TC = T1 + T2)	10 872	10 961	10 289	11 120	10 900	10 801	10 580	10 395
60	Total risk weighted assets	71 254	71 481	70 428	69 567	70 524	70 132	69 947	71 468
61	Common Equity Tier 1 (as a percentage of risk weighted assets)	11,8%	11,6%	11,4%	11,2%	11,2%	11,2%	11,0%	10,9%
62	Tier 1 (as a percentage of risk weighted assets) ⁽²⁾	15,0%	15,0%	14,3%	14,2%	13,7%	13,6%	13,3%	13,1%
63	Total capital (as a percentage of risk weighted assets) ⁽²⁾	15,3%	15,3%	14,6%	16,0%	15,5%	15,4%	15,1%	14,6%

(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) During the second quarter of 2016, a \$250 million (\$183 million net of income taxes) sectoral provision for credit losses was recorded for producers and service companies in the oil and gas sector.

Leverage Ratio under Basel III

(unaudited) (millions of Canadian dollars)

	2017				2016			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Accounting assets vs. leverage ratio exposure – Transitional basis								
1 Total consolidated assets as per published financial statements	245 827	240 072	239 020	234 119	232 206	229 896	220 734	219 301
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(80)	(68)	(90)	(60)	(72)	(76)	(89)	(53)
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 ⁽¹⁾	(381)	519	2 280	1 621	725	1 348	1 091	567
5 Adjustment for securities financing transactions ⁽¹⁾	1 714	2 086	3 408	3 062	2 587	1 220	1 832	1 826
6 Adjustment for off balance-sheet items	20 183	22 407	22 644	22 048	21 937	20 294	19 996	19 599
7 Other adjustments	(4 508)	(4 489)	(4 674)	(3 950)	(3 888)	(4 010)	(3 767)	(3 968)
8 Leverage Ratio Exposure (transitional basis)	262 755	260 527	262 588	256 840	253 495	248 672	239 797	237 272
Leverage ratio common disclosure								
On-balance sheet exposures								
1 On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	214 702	211 909	210 621	208 226	206 283	202 407	193 238	188 359
2 (Asset amounts deducted in determining Basel III transitional Tier 1 capital)	(2 676)	(2 634)	(2 592)	(2 304)	(2 402)	(2 421)	(2 301)	(2 238)
3 Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of lines 1 and 2)	212 026	209 275	208 029	205 922	203 881	199 986	190 937	186 121
Derivative exposures								
4 Replacement cost associated with all derivative transactions (i.e., net of eligible cash variation margin)	1 277	3 551	3 974	4 405	4 755	4 828	6 337	7 318
5 Add-on amounts for PFE associated with all derivative transactions	6 766	6 597	7 044	6 624	6 386	6 417	6 272	6 262
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	–	12	7	–	–	1 046	663	518
10 (Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–	–	–	–	–	–	–	–
11 Total derivative exposures (sum of lines 4 to 10)	8 043	10 160	11 025	11 029	11 141	12 291	13 272	14 098
Securities financing transaction exposures								
12 Gross SFT assets recognised for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	20 789	16 600	17 481	14 779	13 948	14 880	13 760	15 628
13 (Netted amounts of cash payables and cash receivables of gross SFT assets)	(1 275)	(1 211)	(583)	(815)	(314)	(1 270)	(246)	(337)
14 Counterparty credit risk (CCR) exposure for SFTs	2 989	3 296	3 990	3 877	2 901	2 490	2 078	2 163
15 Agent transaction exposures	–	–	–	–	–	–	–	–
16 Total securities financing transaction exposures (sum of lines 12 to 15)	22 503	18 685	20 888	17 841	16 535	16 100	15 592	17 454
Other off-balance sheet exposures								
17 Off-balance sheet exposure at gross notional amount	64 167	62 996	63 451	61 284	60 191	57 378	57 018	55 485
18 (Adjustments for conversion to credit equivalent amounts)	(43 984)	(40 589)	(40 807)	(39 236)	(38 253)	(37 084)	(37 022)	(35 886)
19 Off-balance sheet items (sum of lines 17 and 18)	20 183	22 407	22 644	22 048	21 938	20 294	19 996	19 599
Capital and Total Exposures - Transitional Basis								
20 Tier 1 capital ⁽²⁾	10 668	10 741	10 074	9 876	9 660	9 554	9 296	9 355
21 Total Exposures (sum of lines 3, 11, 16 and 19)	262 755	260 527	262 586	256 840	253 495	248 671	239 797	237 272
Leverage Ratio – Transitional Basis								
22 Basel III leverage ratio	4.1%	4.1%	3.8%	3.8%	3.8%	3.8%	3.9%	3.9%
All-in basis (Required by OSFI)								
23 Tier 1 capital – All-in basis ⁽²⁾	10 457	10 534	9 871	9 668	9 265	9 158	8 880	8 954
24 (Regulatory adjustments)	(2 892)	(2 843)	(2 798)	(2 814)	(2 800)	(2 816)	(2 697)	(2 604)
25 Total Exposures	262 539	260 318	262 382	256 330	253 097	248 276	239 401	236 906
26 Leverage ratio – All-in basis	4.0%	4.0%	3.8%	3.8%	3.7%	3.7%	3.7%	3.8%

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

(2) 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)	Q4 2017				
	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		8 802	–	8 802	
Securities		65 343	10 273	75 616	
Assets purchased under reverse repurchase agreements and securities borrowed		20 789	–	20 789	
Loans					
Residential mortgage		50 518	(26 029)	24 489	
Personal and credit card		36 963	(1 389)	35 574	
Business and government		41 690	–	41 690	
Customers' liability under acceptances		5 991	–	5 991	
Less: Allowances for credit losses		(719)	–	(719)	
Allowances reflected in Tier 2 regulatory capital ⁽⁵⁾	t				(193)
Shortfall of allowances to expected loss	i				–
Allowances not reflected in regulatory capital					(526)
Other assets					
Derivative financial instruments		8 423	–	8 423	
Other		8 027	(63)	7 964	
Goodwill	e				1 668
Intangibles assets	f				1 239
Deferred tax assets					548
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					493
Deferred tax assets - other temporary differences	k				55
Defined-benefit pension fund net assets					6
Significant investments in other financial institutions					221
Significant investments exceeding regulatory thresholds	m + n				–
Significant investments not exceeding regulatory thresholds					221
Other					4 282
Total assets		245 827	(17 208)	228 619	
Liabilities					
Deposits		156 671	–	156 671	
Derivatives financial instruments		6 612	–	6 612	
Other liabilities		68 977	(17 208)	51 769	
Gains and losses due to changes in own credit risk on fair value liabilities	j				(39)
Deferred tax liabilities					157
Related to goodwill	w				–
Related to intangibles	x				172
Related to pensions	y				2
Other deferred tax liabilities					(17)
Other					51 651
Subordinated debt					
Regulatory capital amortization of maturing debentures		9	–	9	
Fair value adjustment and unamortized issuance cost					–
Subordinated debentures used for regulatory capital					9
Allowed for inclusion in Tier 2 capital	r				–
Subject to phase out	r'				9
Ineligible additional Tier 2 capital					–
Excluded from Tier 2 capital due to cap					–
Total liabilities		232 269	(17 208)	215 061	
Equity Attributable to Shareholders					
Common shares	a	12 750	–	12 750	
Contributed surplus	a'				2 768
Retained Earnings	b				58
Accumulated Other Comprehensive Income (loss)	c				7 706
Net gains (losses) on instruments designated as cash flow hedges					168
Other	h				146
Preferred shares					2 050
Allowed for inclusion in additional Tier 1 capital	v				1 850
Subject to phase out	v'				–
Ineligible additional Tier 1 capital ⁽⁶⁾					200
Excluded from additional Tier 1 capital due to cap					–
Non-controlling interests					
Innovative Instruments					769
Allowed for inclusion in additional Tier 1 capital	p				–
Subject to phase out					750
Excluded from additional Tier 1 capital due to cap					–
Other					19
Portion allowed for inclusion into CET1	d				8
Portion allowed for inclusion into Tier 1 capital	q				2
Portion allowed for inclusion into Tier 2 capital	s				2
Portion not allowed for regulatory capital					–
Total Equity		13 558	(27)	13 531	
Total Liabilities and Equity		245 827	(17 235)	228 592	

(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 \$166 million and \$17 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.

(5) During the second quarter of 2016, a \$250 million (\$183 million net of income taxes) sectoral provision for credit losses was recorded for producers and service companies in the oil and gas sector.

(6) Due to the redemption of the Series 28 preferred shares on November 15, 2017.

Capital Adequacy under Basel III⁽¹⁾

(unaudited) (millions of Canadian dollars)	Exposure at default	2017					2016									
		Q4			Risk-weighted assets		Capital requirement ⁽²⁾	Q3			Q2	Q1	Q4	Q3	Q2	Q1
		Standardized	AIRB Approach	Other	Total										Risk-weighted assets	
Credit risk																
Retail																
Residential mortgages	49 028	911	4 644	–	5 555	444	5 638	5 472	5 392	5 455	5 448	5 027	5 265			
Qualifying revolving retail	6 196	–	1 275	–	1 275	102	1 210	1 190	1 155	1 178	1 227	1 152	1 011			
Other retail	16 635	2 357	5 254	–	7 611	609	7 559	7 601	7 280	6 823	6 874	6 705	6 692			
Non-retail																
Corporate	63 492	1 700	25 844	–	27 544	2 204	26 969	27 810	27 226	27 393	26 001	26 869	27 196			
Sovereign	28 493	282	703	–	985	79	1 011	891	857	875	849	580	658			
Financial institutions	5 339	408	1 123	–	1 531	123	1 531	1 639	1 473	1 574	1 371	1 315	1 209			
Banking book equity ⁽³⁾	910	–	910	–	910	73	932	872	886	875	866	834	835			
Securitization	4 740	–	390	–	390	31	423	402	304	831	785	781	795			
Other assets	24 376	–	–	3 645	3 645	292	3 455	3 232	3 137	3 176	3 458	3 256	3 587			
Counterparty credit risk																
Corporate	16 567	47	150	–	197	16	156	238	209	347	119	91	94			
Sovereign	35 603	–	43	–	43	3	50	32	33	34	18	17	14			
Financial institutions	53 169	–	366	–	366	29	508	510	436	402	1 683	1 204	1 415			
Trading portfolio	8 309	161	2 017	–	2 178	174	2 151	2 183	2 190	2 345	2 496	2 659	2 897			
Credit valuation adjustment charge ⁽⁴⁾		2 227	–	–	2 227	178	1 916	2 159	2 030	2 055	2 145	2 090	2 423			
Regulatory scaling factor	–	2 580	–	–	2 580	206	2 557	2 624	2 540	2 540	2 508	2 570	2 593			
Total - Credit risk	312 857	8 093	45 299	3 645	57 037	4 563	56 066	56 855	55 148	55 903	55 848	55 150	56 684			
Market risk																
VaR	–	867	–	–	867	69	972	962	1 340	1 014	1 097	1 319	1 266			
Stressed VaR	–	1 324	–	–	1 324	106	1 630	1 086	1 632	1 067	1 512	1 972	1 707			
Interest-rate specific risk	906	–	–	–	906	73	661	720	843	726	682	680	806			
Total - Market risk	906	2 191	–	–	3 097	248	3 263	2 768	3 815	2 807	3 291	3 971	3 779			
Operational risk		10 039	–	–	10 039	803	9 827	9 760	9 611	9 495	9 391	9 254	9 278			
Total	312 857	19 038	47 490	3 645	70 173	5 614	69 156	69 383	68 574	68 205	68 530	68 375	69 741			
Capital ratio under Basel III																
Common Equity Tier 1 (CET1)						11,2%		11,2%	10,8%	10,6%	10,1%	9,9%	9,8%	9,7%		
Tier 1 ⁽⁵⁾						14,9%		15,2%	14,2%	14,1%	13,5%	13,3%	12,9%	12,8%		
Total ⁽⁵⁾						15,1%		15,5%	14,5%	15,9%	15,3%	15,1%	14,8%	14,2%		
Leverage ratio under Basel III						4,0%		4,0%	3,8%	3,8%	3,7%	3,7%	3,7%	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)	2017							2016			
	Q4			Q3		Q2		Q1		Q4	
	Non-counterparty credit risk	Counterparty credit risk ⁽²⁾	Total	Total							
Credit risk – Risk-weighted assets at beginning	51 285	4 781	56 066	56 855	55 148	55 903	55 848	55 150	56 684	55 743	
Book size	679	154	833	453	889	455	640	(414)	(368)	631	
Book quality	120	21	141	(143)	176	(832)	68	(135)	(41)	(411)	
Model updates	(426)	–	(426)	–	–	–	(954)	–	8	–	
Methodology and policy	–	–	–	–	–	–	–	–	–	–	
Acquisitions and disposals	–	–	–	–	–	–	–	790	–	–	
Foreign exchange movements	368	55	423	(1 099)	642	(378)	301	457	(1 133)	721	
Credit risk – Risk-weighted assets at end	52 026	5 011	57 037	56 066	56 855	55 148	55 903	55 848	55 150	56 684	
Market risk – Risk-weighted assets at beginning			3 263	2 768	3 815	2 807	3 291	3 971	3 779	3 965	
Movement in risk levels ⁽³⁾			(166)	353	(1 047)	1 008	(484)	(680)	192	(186)	
Model updates			–	142	–	–	–	–	–	–	
Methodology and policy			–	–	–	–	–	–	–	–	
Acquisitions and disposals			–	–	–	–	–	–	–	–	
Market risk – Risk-weighted assets at end			3 097	3 263	2 768	3 815	2 807	3 291	3 971	3 779	
Operational risk – Risk-weighted assets at beginning			9 827	9 760	9 611	9 495	9 391	9 254	9 278	9 127	
Movement in risk levels ⁽³⁾			212	67	149	116	104	137	(24)	151	
Acquisitions and disposals			–	–	–	–	–	–	–	–	
Operational risk – Risk-weighted assets at end			10 039	9 827	9 760	9 611	9 495	9 391	9 254	9 278	
Risk-weighted assets at end			70 173	69 156	69 383	68 574	68 205	68 530	68 375	69 741	

(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)	Q4 2017							
			Exposures subject to credit risk capital			Other exposures		
	Drawn		Securitization		Repo-style transactions	Derivatives financial instruments	Subject to market risk capital	
	Non-retail	Retail					All other ⁽¹⁾	
Assets								
Cash and deposits with financial institutions ⁽²⁾	8 347	–	–	–	–	–	455	8 802
Securities								
At fair value through profit or loss	7 762	–	–	–	–	39 774	–	47 536
Available-for-sale	8 432	–	–	–	–	–	120	8 552
Held-to-maturity	9 255	–	–	–	–	–	–	9 255
	25 449	–	–	–	–	39 774	120	65 343
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	20 789	–	–	–	20 789
Loans								
Residential mortgage ⁽³⁾	29 552	20 966	–	–	–	–	–	50 518
Personal and credit card	–	35 574	1 389	–	–	–	–	36 963
Business and government	39 901	1 789	–	–	–	–	–	41 690
	69 453	58 329	1 389	–	–	–	–	129 171
Customers' liability under acceptances	5 991	–	–	–	–	–	–	5 991
Allowance for credit losses ⁽⁴⁾	(119)	(35)	–	–	–	–	(565)	(719)
	75 325	58 294	1 389	–	–	–	(565)	134 443
Other								
Derivative financial instruments ⁽²⁾	–	–	–	–	8 423	–	–	8 423
Purchase receivables	–	910	–	–	–	–	1 104	2 014
Investments in associates and joint ventures	–	–	–	–	–	–	631	631
Premises and equipment	–	72	–	–	–	–	486	558
Goodwill	–	–	–	–	–	–	1 409	1 409
Intangible assets	–	–	–	–	–	–	1 239	1 239
Other assets	–	–	–	–	–	–	2 176	2 176
	–	982	–	–	8 423	–	7 045	16 450
	109 121	59 276	1 389	20 789	8 423	39 774	7 055	245 827

(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.

(4) During the second quarter of 2016, a \$250 million (\$183 million net of income taxes) sectoral provision for credit losses was recorded for producers and service companies in the oil and gas sector.



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

(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
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	-	-	-	-	-	-	4 555	-	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
<hr/>																								
(unaudited) (millions of Canadian dollars)	2016																							
	Q1							Q4							Q3									
	0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total	0%	20%	35%	50%	75%	100%	150%	Total
Retail																								
Residential mortgage	-	-	1 511	27	470	83	-	2 091	47	-	1 598	27	311	87	-	2 070	-	-	2 148	14	268	92	-	2 522
Other retail	-	-	-	-	5 748	-	-	5 748	-	-	-	-	5 189	-	-	5 189	-	-	-	-	5 200	-	-	5 200
	-	-	1 511	27	6 218	83	-	7 839	47	-	1 598	27	5 500	87	-	7 259	-	-	2 148	14	5 468	92	-	7 722
Non-Retail																								
Corporate	-	-	-	-	-	4 897	-	4 897	-	50	-	-	-	5 105	-	5 155	-	-	-	-	-	4 911	-	4 911
Sovereign	312	-	-	26	-	212	-	550	396	-	-	-	-	223	-	619	255	-	-	-	-	193	-	448
Financial Institutions	-	310	-	-	-	122	15	447	-	266	-	-	-	228	16	510	-	499	-	-	-	215	30	744
	312	310	-	26	-	5 231	15	5 894	396	316	-	-	-	5 556	16	6 284	255	499	-	-	-	5 319	30	6 103
Trading	11	-	-	-	-	106	-	117	10	-	-	-	-	249	-	259	9	-	-	-	-	221	-	230
Total	323	310	1 511	53	6 218	5 420	15	13 850	453	316	1 598	27	5 500	5 892	16	13 802	264	499	2 148	14	5 468	5 632	30	14 055

(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)	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	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	
2017																			
(unaudited) (millions of Canadian dollars)	Q1					Q4					Q3								
	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	38 696	6 124	–	–	–	44 820	40 600	5 978	–	–	46 578	41 590	5 977	–	–	–	–	47 567	
Qualifying revolving retail	2 719	2 914	–	–	–	5 633	2 795	2 921	–	–	5 716	2 763	2 929	–	–	–	–	5 692	
Other retail	14 585	1 334	–	–	88	16 007	13 980	1 301	–	–	15 374	14 014	1 279	–	–	–	13	15 306	
	56 000	10 372	–	–	88	66 460	57 375	10 200	–	–	93	67 668	58 367	10 185	–	–	13	68 565	
Non-retail																			
Corporate	41 001	15 607	14 313	15	2 833	73 769	40 956	14 416	14 418	27	2 890	72 707	41 348	13 376	6 842	11	2 824	64 401	
Sovereign	23 401	3 945	35 413	305	131	63 195	23 068	3 623	30 559	328	135	57 713	24 345	3 592	14 956	301	108	43 302	
Financial Institutions	4 214	199	43 963	456	688	49 520	4 074	252	36 835	324	609	42 094	3 398	347	58 296	463	558	63 062	
	68 616	19 751	93 689	776	3 652	186 484	68 098	18 291	81 812	679	3 634	172 514	69 091	17 315	80 094	775	3 490	170 765	
Trading book	–	–	–	–	9 174	–	9 174	–	–	9 623	–	9 623	–	–	–	9 683	–	9 683	
Securitization	–	–	–	–	–	–	–	–	–	3 452	–	4 068	636	–	–	–	2 541	–	3 177
Total - Gross Credit Risk	124 616	30 123	93 689	9 950	7 472	265 850	126 089	28 491	81 812	10 302	7 179	253 873	128 094	27 500	80 094	10 458	6 044	252 190	
Standardized Approach	10 799	71	2 378	126	476	13 850	10 458	277	2 294	282	491	13 802	10 851	455	2 058	238	453	14 055	
AIRB Approach ⁽²⁾	113 817	30 052	91 311	9 824	6 996	252 000	115 631	28 214	79 518	10 020	6 688	240 071	117 243	27 045	78 036	10 220	5 591	238 135	
Total - Gross Credit Risk	124 616	30 123	93 689	9 950	7 472	265 850	126 089	28 491	81 812	10 302	7 179	253 873	128 094	27 500	80 094	10 458	6 044	252 190	
Adjustment to exposure for collateral	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Standardized Approach	–	–	(2 320)	(5)	–	(2 325)	–	–	(2 152)	(36)	–	(2 188)	–	–	(2 000)	(32)	–	(2 032)	
AIRB Approach ⁽²⁾	–	–	(85 152)	–	–	(85 152)	–	–	(74 517)	–	–	(74 517)	–	–	(66 866)	–	–	(66 866)	
Total - Net Credit Risk	124 616	30 123	6 217	9 945	7 472	178 373	126 089	28 491	5 143	10 266	7 179	177 168	128 094	27 500	11 228	10 426	6 044	183 292	

(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⁾

(unaudited) (millions of Canadian dollars)

			2017								
			Q4								
	Risk Grade	PD bands	EAD	No. 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	Exceptionally low	0.000% - 0.144%	773	-	100%	0,08%	18,0%	3,0%	25	0,1	3%
	Very low	0.145% - 0.506%	1 021	-	100%	0,31%	11,0%	6,0%	59	0,3	6%
	Low	0.507% - 1.116%	630	-	100%	0,76%	6,0%	7,0%	42	0,3	7%
	Low	1.117% - 2.681%	365	-	100%	1,72%	4,0%	7,0%	27	0,3	8%
	Medium	2.682% - 9.348%	217	-	100%	4,48%	3,0%	9,0%	20	0,3	11%
	High	9.349% - 99.99%	88	-	100%	27,41%	3,0%	15,0%	13	0,7	24%
	Default	100,00%	56	-	100%	100,00%	3,0%	26,0%	14	0,8	45%
			3 150	-	100%	3,31%	10,0%	6,0%	200	2,8	7%
Uninsured Undrawn⁽⁴⁾	Exceptionally low	0.000% - 0.144%	6 051	12 185	63%	0,05%	17,0%	2,0%	147	0,6	3%
	Very low	0.145% - 0.506%	1 313	1 870	79%	0,25%	19,0%	9,0%	120	0,6	10%
	Low	0.507% - 1.116%	242	326	82%	0,72%	19,0%	19,0%	46	0,3	21%
	Low	1.117% - 2.681%	68	104	77%	1,66%	18,0%	32,0%	22	0,2	36%
	Medium	2.682% - 9.348%	20	25	84%	4,31%	19,0%	58,0%	11	0,2	68%
	High	9.349% - 99.99%	3	2	98%	14,93%	19,0%	94,0%	3	0,1	128%
	Default	100,00%	2	4	71%	100,00%	16,0%	199,0%	5	-	199%
			7 699	14 516	66%	0,17%	18,0%	5,0%	354	2,0	5%
Uninsured Drawn⁽⁵⁾	Exceptionally low	0.000% - 0.144%	18 653			0,07%	20,0%	4,0%	698	2,8	4%
	Very low	0.145% - 0.506%	11 802			0,27%	23,0%	11,0%	1 335	7,3	12%
	Low	0.507% - 1.116%	3 258			0,73%	23,0%	23,0%	762	5,5	25%
	Low	1.117% - 2.681%	1 190			1,69%	23,0%	40,0%	479	4,6	45%
	Medium	2.682% - 9.348%	567			4,56%	22,0%	69,0%	391	5,7	82%
	High	9.349% - 99.99%	206			24,27%	24,0%	126,0%	258	12,1	199%
	Default	100,00%	78			100,00%	23,0%	213,0%	167	7,7	335%
			35 754			0,68%	22,0%	11,0%	4 090	45,7	13%
Qualifying revolving credit	Exceptionally low	0.000% - 0.144%	3 200	5 551	60%	0,05%	73,0%	2,0%	77	1,2	3%
	Very low	0.145% - 0.506%	1 160	942	81%	0,29%	76,0%	11,0%	126	2,6	14%
	Low	0.507% - 1.116%	687	335	90%	0,78%	75,0%	23,0%	161	4,0	31%
	Low	1.117% - 2.681%	618	213	96%	1,79%	81,0%	48,0%	296	9,0	66%
	Medium	2.682% - 9.348%	422	60	102%	4,56%	81,0%	91,0%	383	15,4	137%
	High	9.349% - 99.99%	88	5	104%	21,21%	77,0%	191,0%	168	15,0	405%
	Default	100,00%	21	-	103%	100,00%	59,0%	299,0%	64	9,8	873%
			6 196	7 106	74%	1,30%	75,0%	21,0%	1 275	57,0	32%
Other retail⁽⁶⁾	Exceptionally low	0.000% - 0.144%	2 390	1 659	83%	0,06%	43,0%	7,0%	177	0,7	8%
	Very low	0.145% - 0.506%	2 896	431	97%	0,30%	54,0%	28,0%	808	4,7	30%
	Low	0.507% - 1.116%	2 475	359	98%	0,78%	61,0%	55,0%	1 366	11,9	61%
	Low	1.117% - 2.681%	1 775	123	98%	1,72%	65,0%	79,0%	1 406	19,8	93%
	Medium	2.682% - 9.348%	846	57	98%	4,42%	66,0%	96,0%	810	24,4	132%
	High	9.349% - 99.99%	225	5	99%	19,53%	67,0%	141,0%	319	29,7	306%
	Default	100,00%	103	3	100%	100,00%	57,0%	357,0%	368	35,1	784%
			10 710	2 637	94%	2,28%	56,0%	49,0%	5 254	126,3	64%
			63 509	24 259	87%	1,08%	32,0%	18,0%	11 173	233,8	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 $(\text{RWA} + 12.5 \times \text{EL}) / \text{EAD}$.

(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⁾

(unaudited) (millions of Canadian dollars)

			2017								
			Q3								
	Risk Grade	PD bands	EAD	No. 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	Exceptionally low	0.000% - 0.144%	851	-	100%	0,07%	17,0%	3,0%	27	0,1	3%
	Very low	0.145% - 0.506%	1 051	-	100%	0,31%	11,0%	6,0%	58	0,3	6%
	Low	0.507% - 1.116%	825	-	100%	0,78%	6,0%	6,0%	53	0,4	7%
	Low	1.117% - 2.681%	565	-	100%	1,72%	4,0%	7,0%	39	0,4	8%
	Medium	2.682% - 9.348%	323	-	100%	4,64%	3,0%	9,0%	28	0,4	10%
	High	9.349% - 99.99%	91	-	100%	27,23%	3,0%	14,0%	13	0,6	23%
	Default	100,00%	61	-	100%	100,00%	3,0%	25,0%	15	1,0	44%
			3 767	-	100%	3,20%	9,0%	6,0%	233	3,2	7%
Uninsured Undrawn⁽⁴⁾	Exceptionally low	0.000% - 0.144%	4 287	9 951	57%	0,05%	23,0%	3,0%	135	0,5	3%
	Very low	0.145% - 0.506%	1 780	4 034	72%	0,26%	23,0%	11,0%	202	1,2	12%
	Low	0.507% - 1.116%	170	200	88%	0,71%	24,0%	24,0%	41	0,3	26%
	Low	1.117% - 2.681%	36	43	89%	1,67%	24,0%	41,0%	15	0,1	46%
	Medium	2.682% - 9.348%	11	13	83%	4,32%	24,0%	72,0%	8	0,1	85%
	High	9.349% - 99.99%	1	1	85%	18,59%	24,0%	132,0%	1	-	192%
	Default	100,00%	1	2	61%	100,00%	23,0%	283,0%	3	-	283%
			6 286	14 244	62%	0,16%	23,0%	6,0%	405	2,2	7%
Uninsured Drawn⁽⁵⁾	Exceptionally low	0.000% - 0.144%	17 179			0,07%	23,0%	4,0%	695	2,8	4%
	Very low	0.145% - 0.506%	12 880			0,27%	25,0%	12,0%	1 606	8,8	13%
	Low	0.507% - 1.116%	3 187			0,71%	26,0%	25,0%	809	5,8	28%
	Low	1.117% - 2.681%	867			1,68%	26,0%	44,0%	385	3,7	50%
	Medium	2.682% - 9.348%	412			4,65%	25,0%	78,0%	320	4,8	92%
	High	9.349% - 99.99%	164			26,54%	25,0%	136,0%	223	11,1	222%
	Default	100,00%	54			100,00%	26,0%	207,0%	113	8,6	405%
			34 743			0,58%	24,0%	12,0%	4 151	45,6	14%
Qualifying revolving credit	Exceptionally low	0.000% - 0.144%	3 139	5 431	60%	0,05%	73,0%	2,0%	76	1,2	3%
	Very low	0.145% - 0.506%	1 137	916	81%	0,29%	75,0%	11,0%	121	2,5	13%
	Low	0.507% - 1.116%	653	298	90%	0,78%	73,0%	23,0%	150	3,7	30%
	Low	1.117% - 2.681%	587	185	96%	1,79%	80,0%	47,0%	278	8,5	65%
	Medium	2.682% - 9.348%	407	56	102%	4,54%	81,0%	90,0%	366	14,6	135%
	High	9.349% - 99.99%	82	4	103%	21,55%	76,0%	190,0%	155	14,1	406%
	Default	100,00%	22	-	103%	100,00%	59,0%	294,0%	64	10,2	875%
			6 027	6 890	74%	1,30%	75,0%	20,0%	1 210	54,8	31%
Other retail⁽⁶⁾	Exceptionally low	0.000% - 0.144%	2 387	1 626	83%	0,07%	43,0%	7,0%	176	0,7	8%
	Very low	0.145% - 0.506%	2 963	429	97%	0,30%	54,0%	28,0%	831	4,8	30%
	Low	0.507% - 1.116%	2 553	338	98%	0,78%	61,0%	55,0%	1 405	12,2	61%
	Low	1.117% - 2.681%	1 702	123	98%	1,72%	65,0%	80,0%	1 354	19,1	94%
	Medium	2.682% - 9.348%	776	60	98%	4,42%	65,0%	95,0%	736	22,2	131%
	High	9.349% - 99.99%	199	6	99%	20,57%	63,0%	135,0%	269	26,1	299%
	Default	100,00%	105	3	99%	100,00%	57,0%	349,0%	365	36,1	781%
			10 685	2 585	94%	2,24%	56,0%	48,0%	5 136	121,2	62%
			61 508	23 719	86%	1,06%	33,0%	18,0%	11 135	227,0	23%

(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 $(\text{RWA} + 12.5 \times \text{EL}) / \text{EAD}$.

(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⁾



(unaudited) (millions of Canadian dollars)

Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	Q4 2017						Q3 2017						Q2 2017									
			EAD Amount			Average PD (%)		Average LGD (%)		EAD Amount			Average PD (%)		Average LGD (%)		EAD Amount			Average PD (%)		Average LGD (%)		
			Drawn	Undrawn	Other	Total				RWA	Percentage RWA (%)	Drawn	Undrawn	Other	Total	RWA	Percentage RWA (%)	Drawn	Undrawn	Other	Total	RWA	Percentage RWA (%)	
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%	36	19	40	95	0,03%	39,3%
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%
2	0.044 - 0.063	A	208	596	590	1 394	0,05%	53,3%	263	19%	153	571	592	1 316	0,05%	52,5%	253	19%	146	577	618	1 341	0,05%	52,9%
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	266	2 816	0,08%	48,5%
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%
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%
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%
4.5	0,462 - 0,762	BB+	6 540	1 859	177	8 576	0,59%	35,2%	3 841	45%	6 256	1 666	8 094	9 599	0,59%	35,4%	3 524	46%	6 212	1 545	194	7 951	0,59%	35,8%
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%
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%
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%
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%
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%
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%
8	15,284 - 25,195	CCC	51	2	2	55	19,62%	39,6%	92	167%	47	9	-	56	19,62%	37,9%	90	161%	37	5	-	42	19,62%	30,4%
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%
9	100	CC	282	1	-	283	100,00%	32,1%	187	66%	390	-	-	390	100,00%	24,9%	249	64%	309	1	-	310	100,00%	26,9%
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%

Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	Q4 2017						Q3 2017						Q2 2017									
			EAD Amount			Average PD (%)		Average LGD (%)		EAD Amount			Average PD (%)		Average LGD (%)		EAD Amount			Average PD (%)		Average LGD (%)		
			Drawn	Undrawn	Other	Total				RWA	Percentage RWA (%)	Drawn	Undrawn	Other	Total	RWA	Percentage RWA (%)	Drawn	Undrawn	Other	Total	RWA	Percentage RWA (%)	
1	0,000 - 0,010	AAA... AA-	16 988	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%
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	0,01%	13,0%
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%
2.5	0,033 - 0,063	A-	85	-	1 052	1 137	0,07%	10,8%	32	3%	84	1	231	316	0,07%	10,7%	11	3%	8	1	287	296	0,05%	10,8%
3	0,063 - 0,103	A-	-	-	5	5	0,12%	17,2%	-	-	-	-	740	740	0,12%	11,3%	28	4%	-	-	623	623	0,08%	0,1%
3.5	0,107 - 0,191	BBB+	-	-	5	5	0,21%	11,6%	-	-	-	-	10	10	0,21%	11,6%	1	-	-	-	7	7	0,14%	-
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%
7	6,276 - 11,231	B-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	8,40%	18,5%	
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			4 223	193	2 528	6 944	0,23%	35,6%	1 489	21%	4 337	221	2 750	7 308	0,20%	36,0%	1 728	24%	4 010	227	3 765	8 002	0,19%	38,8%

(1) The data presented above take into account permissible netting and exclude SME-Retail Portfolio, trading related portfolio and Equity.
(2) EAD undrawn commitments are the undrawn commitments (notional amount) that is currently undrawn but expected to be drawn in the event of a default.

Credit commitments - AIRB Non-retail portfolios	Q4 2017			Q3 2017			Q2 2017			
	Notional undrawn commitments		EAD on undrawn commitments ⁽²⁾	Notional undrawn commitments		EAD on undrawn commitments ⁽²⁾	Notional undrawn commitments		EAD on undrawn commitments ⁽²⁾	
	Corporate	40 342	15 793	Sovereign	9 567	4 024	Financial Institutions	386	193	Total

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

(unaudited) (millions of Canadian dollars)

Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	Q1 2017						Q4 2016						Q3 2016													
			EAD Amount			Average PD (%)		Average LGD (%)		RWA	EAD Amount			Average PD (%)		Average LGD (%)		RWA	EAD Amount			Average PD (%)		Average LGD (%)		RWA	Percentage RWA (%)	
			Drawn	Undrawn	Other	Total					Drawn	Undrawn	Other	Total					Drawn	Undrawn	Other	Total						
1	0.000 - 0.035	AAA... AA-	43	20	65	128	0,03%	36,2%	6	5%	39	19	71	129	0,03%	35,3%	5	4%	46	18	4	68	0,03%	30,1%	3	4%		
1,5	0.035 - 0.044	A+	55	11	369	435	0,04%	40,0%	24	6%	43	14	350	407	0,04%	39,5%	22	5%	45	15	141	201	0,04%	44,3%	12	6%		
2	0.044 - 0.063	A	167	583	661	1 411	0,05%	51,5%	262	19%	163	511	540	1 214	0,05%	51,3%	233	19%	150	317	443	910	0,05%	53,8%	178	20%		
2,5	0.063 - 0.103	A-	1 381	1 151	268	2 800	0,08%	50,0%	626	22%	1 603	1 001	223	2 827	0,08%	52,4%	624	22%	1 635	999	50	2 684	0,08%	52,4%	594	22%		
3	0.103 - 0.170	BBB+	3 730	2 427	403	6 560	0,13%	39,6%	1 792	27%	4 052	2 445	402	6 899	0,13%	40,5%	1 900	28%	4 288	3 014	261	7 563	0,13%	42,1%	2 223	29%		
4	0.280 - 0,462	BBB-	7 048	2 789	500	10 345	0,36%	34,5%	3 949	38%	6 662	2 370	550	9 582	0,36%	36,5%	3 752	39%	7 226	2 120	371	9 717	0,36%	33,3%	3 411	35%		
4,5	0.462 - 0,762	BB+	5 376	1 423	196	6 995	0,59%	35,9%	2 976	43%	5 660	1 551	135	7 346	0,59%	35,7%	3 297	45%	5 486	1 241	173	6 900	0,59%	35,9%	3 024	44%		
5	0.762 - 1,256	BB	6 894	1 528	292	8 714	0,98%	36,2%	4 673	54%	6 255	1 494	414	8 163	0,98%	35,1%	4 478	55%	6 722	1 299	285	8 306	0,98%	34,3%	4 327	52%		
5,5	1,256 - 2,070	BB-	3 195	664	58	3 917	1,61%	34,9%	2 478	63%	3 326	646	121	4 093	1,61%	35,3%	2 643	65%	3 015	610	67	3 692	1,61%	34,8%	2 375	64%		
6	2,070 - 3,412	B+	2 285	519	63	2 867	2,66%	33,8%	2 073	72%	2 047	333	45	2 425	2,66%	32,4%	1 681	69%	2 023	316	84	2 423	2,66%	34,0%	1 757	73%		
6,5	3,412 - 5,625	B	1 122	247	169	1 538	4,38%	28,8%	1 161	75%	1 142	298	205	1 645	4,38%	30,7%	1 354	82%	1 142	235	204	1 581	4,38%	31,2%	1 267	80%		
7	5,625 - 9,272	B-	710	83	9	802	7,22%	28,2%	668	83%	840	82	11	933	7,22%	30,3%	831	89%	778	78	11	867	7,22%	30,1%	745	86%		
7,5	9,272 - 15,284	CCC+	241	33	3	277	11,90%	27,2%	278	100%	290	51	15	356	11,90%	24,4%	328	92%	224	36	14	274	11,90%	26,3%	269	98%		
8	15,284 - 25,195	CCC	68	11	-	79	19,62%	41,1%	130	165%	78	6	-	84	19,62%	34,2%	116	138%	151	2	-	153	19,62%	15,1%	99	65%		
8,5	25,195 - 100	CCC-	22	1	1	24	32,35%	39,5%	42	175%	16	1	1	18	32,35%	29,0%	22	122%	63	2	5	70	32,35%	11,7%	37	53%		
9	100	CC	326	3	3	332	100,00%	25,6%	698	210%	337	3	5	345	100,00%	44,1%	1 033	299%	292	20	5	317	100,00%	35,9%	613	193%		
9,5	100	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
10	100	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total			38 666	15 563	3 679	57 908	1,27%	37,6%	25 558	44%	38 467	14 230	3 696	56 393	1,33%	37,6%	25 583	45%	38 965	13 112	2 893	54 970	1,45%	37,0%	23 805	43%		

Internal Ratings grades	PD Range 0.00%	S&P rating equivalent	Q1 2017						Q4 2016						Q3 2016															
			EAD Amount			Average PD (%)		Average LGD (%)		RWA	EAD Amount			Average PD (%)		Average LGD (%)		RWA	EAD Amount			Average PD (%)		Average LGD (%)		RWA	Percentage RWA (%)			
			Drawn	Undrawn	Other	Total					Drawn	Undrawn	Other	Total					Drawn	Undrawn	Other	Total								
1	0.000 - 0.010	AAA... AA-	16 215	78	1 165	17 458	0,01%	6,2%	149	1%	16 302	80	763	17 145	0,01%	7,4%	210	1%	17 679	78	331	18 088	0,01%	7,7%	212	1%				
1,5	0,010 - 0,019	A+	4 664	3 076	1 169	8 909	0,01%	12,9%	239	3%	4 426	566	7 866	0,01%	12,9%	231	3%	4 483	2 530	663	7 676	0,01%	12,7%	225	3%					
2	0,019 - 0,033	A	1 690	763	72	2 525	0,02%	17,8%	122	5%	1 479	642	2 449	0,03%	18,0%	110	4%	1 509	957	2 969	0,03%	18,5%	132	4%						
2,5	0,033 - 0,060	A-	8	1	7	16	0,04%	16,6%	1	6%	9	1	11	0,05%	16,4%	1	9%	9	1	-	10	0,05%	16,3%	-	-					
3	0,060 - 0,107	BBB+	-	-	885	885	0,08%	11,3%	21	2%	-	-	742	742	0,08%	11,3%	20	3%	-	-	-	-	-	-	-	-	-			
3,5	0,107 - 0,191	BBB	-	-	1	1	0,14%	11,6%	-	-	-	-	8	8	0,14%	11,6%	-	-	-	-	-	-	-	-	-	-				
4	0,191 - 0,342	BBB-	-	-	-	-	-	-	-	-	-	-	10	-	-	5	15	0,26%	21,0%	2	10	0,26%	21,0%	2	20%					
4,5	0,342 - 0,612	BB+	-	-	-	-	-	-	-	-	-	-	120	41%	200	25	12	237	4,69%	14,1%	99	42%	200	26	12	238	4,69%	14,1%	101	42%
5	0,612 - 1,095	BB	-	-	-	-	-	-	-	-	-	-	18	67%	-	-	18	8,40%	18,5%	12	67%	-	-	-	-	-	-	-	-	
5,5	1,095 - 1,960	BB-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
6	1,960 - 3,507	B+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
6,5	3,507 - 6,276	B	257	27	12	296	4,69%	14,1%	120	41%	200	25	12	237	4,69%	14,1%	99	42%	200	26	12	238	4,69%	14,1%	101	42%				
7	6,276 - 11,231	B-	18	-	-	18	8,40%	18,5%	12	67%	18	-	-	18	8,40%	18,5%	12	67%	-	-	-	-	-	-	-	-	-			
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			4 038	199	3 186	7 423	0,21%	39,8%	1 702	23%	3 875	190	2 758	6 823	0,22%	39,8%	1 671	24%	3 071	186	10 573	13 830	0,23%	39,1%	2 694	19%				

Credit commitments - AIRB Non-retail portfolios	Q1 2017			Q4 2016			Q3 2016		
Notional undrawn commitments		EAD on undrawn commitments^(b)	Notional undrawn commitments		EAD on undrawn commitments^(b)	Notional undrawn commitments		EAD on undrawn commitments^(b)	
Corporate	39 453	1							

AIRB Credit Risk Exposure - Back-Testing⁽¹⁾

(unaudited) (millions of Canadian dollars)	2017											
	Q4						Q3					
	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⁾
Retail portfolio⁽⁵⁾												
Uninsured residential mortgages incl. Home equity line of credit ⁽⁶⁾	0,39%	0,19%	25,69%	15,01%	98,75%	81,82%	0,37%	0,18%	26,17%	11,18%	97,75%	83,92%
Insured residential mortgages ⁽⁷⁾	1,30%	0,75%	3,34%	na	na	na	1,33%	0,76%	3,24%	na	na	na
Qualifying revolving retail	1,29%	1,20%	70,85%	79,60%	99,18%	98,33%	1,35%	1,21%	72,18%	81,79%	98,41%	97,51%
Other retail	1,80%	1,45%	70,43%	60,68%	96,00%	89,96%	1,76%	1,49%	70,38%	59,72%	97,11%	90,12%
Wholesale & Sovereign portfolio⁽⁸⁾												
Corporate	1,44%	0,37%	38,85%	25,07%	83,39%	80,03%	1,46%	0,39%	39,21%	22,16%	86,87%	82,46%
Sovereign ⁽⁹⁾	0,03%	0,00%	11,54%	na	88,30%	na	0,04%	0,00%	11,54%	na	88,30%	na
Financial Institutions ⁽⁹⁾	0,52%	0,00%	40,75%	na	100,00%	na	0,57%	0,00%	40,75%	na	100,00%	na
(unaudited) (millions of Canadian dollars)	2017											
	Q2						Q1					
	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⁾
Retail portfolio⁽⁵⁾												
Uninsured residential mortgages incl. Home equity line of credit ⁽⁶⁾	0,43%	0,19%	26,10%	11,12%	99,39%	82,34%	0,38%	0,19%	26,61%	12,02%	98,12%	81,17%
Insured residential mortgages ⁽⁷⁾	1,33%	0,82%	3,30%	na	na	na	1,36%	0,82%	2,93%	na	na	na
Qualifying revolving retail	1,36%	1,25%	72,91%	81,85%	98,49%	97,02%	1,34%	1,27%	71,13%	78,11%	98,63%	96,83%
Other retail	1,79%	1,55%	70,74%	58,88%	97,47%	91,15%	1,79%	1,57%	71,36%	59,02%	97,22%	91,55%
Wholesale & Sovereign portfolio⁽⁸⁾												
Corporate	1,45%	0,45%	40,11%	18,41%	85,63%	76,01%	1,47%	0,44%	41,68%	21,97%	83,75%	75,54%
Sovereign ⁽⁹⁾	0,04%	0,00%	11,54%	na	81,00%	na	0,04%	0,00%	11,54%	na	81,00%	na
Financial Institutions ⁽⁹⁾	0,55%	0,00%	39,00%	na	100,00%	na	0,58%	0,00%	39,00%	na	100,00%	na

(1) Actual and estimated parameters are reported on a three-month lag. For example, for Q4 2017, estimated percentages are as of July 31st, 2016 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)

(unaudited)
(millions of Canadian dollars)

Non-Retail Portfolio	2017																	
	Q4					Q3					Q2							
	EAD - Gross Exposure ⁽¹⁾																	
	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

Non-Retail Portfolio	2016																	
	Q1					Q4					Q3							
	EAD - Gross Exposure ⁽¹⁾																	
	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	3 772	285	8	-	-	4 065	3 572	349	6	-	-	3 927	3 688	227	6	-	-	3 921
Oil and Gas	2 019	1 623	54	-	-	3 696	2 126	1 510	62	-	-	3 698	2 559	1 269	58	-	-	3 886
Mining	424	690	42	-	-	1 156	527	704	33	-	-	1 264	317	738	34	-	-	1 089
Utilities	2 302	1 711	471	-	-	4 484	2 093	1 638	465	-	-	4 196	2 240	1 660	452	-	-	4 352
Construction ⁽²⁾	2 281	1 025	214	-	-	3 520	2 200	1 151	212	-	-	3 563	2 249	1 122	210	-	-	3 581
Manufacturing	3 730	2 221	214	-	-	6 165	3 516	2 065	231	-	-	5 812	3 765	1 921	258	-	-	5 944
Wholesale Trade	1 903	743	39	-	-	2 685	1 918	723	39	-	-	2 680	1 832	652	46	-	-	2 530
Retail Trade	2 765	1 615	43	-	-	4 423	2 790	913	45	-	-	3 748	2 695	1 106	45	-	-	3 846
Transportation	2 376	1 792	105	51	-	4 324	2 812	1 753	97	17	-	4 679	2 426	1 631	94	-	-	4 151
Communications	1 511	681	259	-	-	2 451	1 511	686	285	-	-	2 482	1 467	652	283	-	-	2 402
Finance and Insurance	22 259	1 829	919	76 261	774	102 042	22 090	1 440	865	66 450	679	91 524	23 136	1 311	751	75 497	775	101 470
Real Estate ⁽³⁾	7 942	898	34	59	-	8 933	7 746	814	29	61	-	8 650	7 669	697	27	72	-	8 465
Professional Services	1 220	771	303	-	2	2 296	1 174	721	320	-	-	2 215	1 137	730	330	-	-	2 197
Education & Health Care	2 545	1 290	7	5	-	3 847	2 473	1 325	7	8	-	3 813	2 524	1 224	7	-	-	3 755
Other Services	4 511	1 106	275	7	-	5 899	4 485	1 193	294	3	-	5 975	4 336	1 056	220	-	-	5 612
Government	5 024	1 471	17	16 587	-	23 099	4 715	1 287	23	14 716	-	20 741	4 657	1 170	17	4 525	-	10 369
Other	2 032	-	648	719	-	3 399	2 350	19	621	557	-	3 547	2 394	149	652	-	-	3 195
Total - Non-retail⁽⁴⁾	68 616	19 751	3 652	93 689	776	186 484	68 098	18 291	3 634	81 812	679	172 514	69 091	17 315	3 490	80 094	775	170 765

(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⁾

(unaudited) (millions of Canadian dollars)	2017																		
	Q4						Q3						Q2						
	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	-	-	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		
2016																			
2017									2016										
Q1						Q4						Q3							
(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	13	-	1 102	-	3	-	1 118	-	-	-	-	1 183	2	-	-	1 675	3	-	1 678
Italy	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	-	1	1	
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Spain	23	-	-	-	-	81	104	25	-	-	-	-	91	116	20	-	90	110	
Total GIIPS	36	-	1 102	3	82	1 223	25	-	1 183	2	92	1 302	20	-	1 675	3	91	1 789	
France	15	39	1 379	220	264	1 917	157	41	1 208	175	296	1 877	54	33	1 210	261	292	1 850	
Germany	-	-	-	-	8	38	46	11	-	-	7	41	59	1	-	16	51	68	
United Kingdom	235	5	4 647	918	5	5 810	57	5	2 377	961	4	3 404	70	5	3 915	834	5	4 829	
Other Europe	34	-	1 702	151	16	1 903	45	-	1 661	155	19	1 880	68	-	1 237	193	19	1 517	
Total - Credit Risk	320	44	8 830	1 300	405	10 899	295	46	6 429	1 300	452	8 522	213	38	8 037	1 307	458	10 053	
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⁾	320	44	2 126	405	2 895		295	46	1 684	452	2 477		213	38	1 700	458	2 409		

(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 and Allowance for Credit Losses

(unaudited) (millions of Canadian dollars)	2017				2016				2015				YTD		
Formation of Gross Impaired Loans ⁽¹⁾ (by sector)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	2017	2016	2015
Opening balance	460	422	442	492	452	521	434	457	449	446	389	486	492	457	486
Write-offs															
Personal and Commercial															
Retail	(21)	(19)	(21)	(18)	(20)	(18)	(20)	(23)	(23)	(18)	(21)	(21)	(79)	(81)	(83)
Commercial	(58)	(2)	(33)	(10)	(19)	(66)	(5)	(20)	(11)	(16)	(15)	(62)	(103)	(110)	(104)
Wealth Management	(2)	(1)	(1)	(3)	(1)	(2)	(1)	(2)	(1)	(1)	(1)	(1)	(7)	(6)	(4)
Financial Markets	(5)	–	–	–	–	–	–	–	–	(6)	–	–	(5)	–	(6)
U.S. Specialty Finance and International															
ABA Bank ⁽²⁾	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total write-offs	(86)	(22)	(55)	(31)	(40)	(86)	(26)	(45)	(35)	(41)	(37)	(84)	(194)	(197)	(197)
Formation															
Personal and Commercial															
Retail	17	13	18	23	17	11	21	23	23	16	28	22	71	72	89
Commercial	(5)	36	14	(43)	60	6	89	(5)	19	24	65	(37)	2	150	71
Wealth Management	2	1	1	–	2	(1)	3	4	1	4	1	2	4	8	8
Financial Markets	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
U.S. Specialty Finance and International															
ABA Bank ⁽²⁾	(8)	10	2	1	1	1	–	–	–	–	–	–	5	2	–
Other	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total formation	6	60	35	(19)	80	17	113	22	43	44	94	(13)	82	232	168
Closing balance	380	460	422	442	492	452	521	434	457	449	446	389	380	492	457
	2017				2016				2015				YTD		
Formation of Gross Impaired Loans (by activity)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	2017	2016	2015
Opening balance	460	422	442	492	452	521	434	457	449	446	389	486	492	457	486
Classified as impaired during the period	132	159	192	79	190	204	211	145	135	149	187	107	562	750	578
Transferred to not impaired during the period	(4)	(4)	(5)	(5)	(4)	(6)	(6)	(3)	(5)	(7)	(8)	(3)	(18)	(19)	(23)
Net repayments	(86)	(60)	(121)	(60)	(80)	(158)	(66)	(91)	(64)	(78)	(62)	(100)	(327)	(395)	(304)
Write-offs	(119)	(52)	(82)	(54)	(59)	(104)	(45)	(64)	(53)	(60)	(54)	(97)	(307)	(272)	(264)
Recoveries of loans previously written off	(7)	(5)	(5)	(7)	(7)	(6)	(5)	(4)	(5)	(5)	(7)	(5)	(24)	(22)	(22)
Disposals of loans	–	–	–	–	–	–	–	–	–	–	–	(1)	–	–	(1)
Exchange and other movements	4	–	1	(3)	–	1	(2)	(6)	–	4	1	2	2	(7)	7
Closing balance	380	460	422	442	492	452	521	434	457	449	446	389	380	492	457
	2017				2016				2015				YTD		
Allowance for Credit Losses	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	2017	2016	2015
Allowances at beginning	767	762	786	781	780	837	566	569	561	563	561	604	781	569	604
Write-offs	(126)	(57)	(87)	(61)	(66)	(110)	(50)	(68)	(58)	(65)	(61)	(103)	(331)	(294)	(287)
Recoveries of amounts written off in previous years	6	5	7	6	7	8	5	5	5	6	5	5	24	25	21
Charge to income statement (provision for credit losses) ⁽³⁾	70	58	56	60	59	45	317	63	61	56	57	54	244	484	228
Disposal of loans	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Exchange and other movements	2	(1)	–	–	1	–	(1)	(3)	–	1	1	–	1	(3)	2
Allowances at end	719	767	762	786	781	780	837	566	569	561	563	561	719	781	569

(1) Credit card receivables are not included.

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

(3) During the second quarter of 2017, the Bank reversed the sectoral provision on non-impaired loans for the oil and gas producer and service company loan portfolio by \$40 million.

The sectoral provision on non-impaired loans of \$250 million was recorded during the second quarter of 2016.

Moreover, during the second quarter of 2017, the Bank increased the collective allowance on non-impaired loans for credit risk by \$40 million related to growth in the Bank's overall credit portfolio.



Gross Credit Exposure by Residual Contractual Maturity⁽¹⁾

(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

(unaudited) (millions of Canadian dollars)	2017				2016				Q3			
	Q1				Q4				Q3			
	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	26 437	16 037	255	42 729	27 348	16 855	305	44 508	27 940	16 793	312	45 045
Qualifying revolving retail	5 633	—	—	5 633	5 716	—	—	5 716	5 692	—	—	5 692
Other retail	5 232	2 844	2 183	10 259	5 181	2 837	2 167	10 185	5 197	2 832	2 077	10 106
	37 302	18 881	2 438	58 621	38 245	19 692	2 472	60 409	38 829	19 625	2 389	60 843
Non-retail												
Corporate	48 276	18 534	2 062	68 872	47 848	17 643	2 061	67 552	40 456	17 015	2 019	59 490
Sovereign	45 614	11 990	5 041	62 645	40 121	11 829	5 144	57 094	26 525	10 899	5 430	42 854
Financial Institutions	48 068	990	15	49 073	39 702	1 880	2	41 584	60 350	1 925	43	62 318
	141 958	31 514	7 118	180 590	127 671	31 352	7 207	166 230	127 331	29 839	7 492	164 662
Trading book	1 410	4 736	2 911	9 057	1 322	4 847	3 195	9 364	1 069	4 958	3 426	9 453
Total	180 670	55 131	12 467	248 268	167 238	55 891	12 874	236 003	167 229	54 422	13 307	234 958

(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)	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

(unaudited) (millions of Canadian dollars)	2017			2016		
	Q1		Q4	Q3		Q4
Total exposure covered by:	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾	Standardized ⁽¹⁾	AIRB ⁽²⁾
Retail						
Residential mortgage	426	3 302	427	5 364	1 146	6 259
Qualifying revolving retail	—	—	—	—	—	—
Other retail	2 705	188	2 650	195	2 578	195
	3 131	3 490	3 077	5 559	3 724	6 454
Non-retail						
Corporate	1 056	2 012	797	2 096	712	2 099
Sovereign	—	—	—	—	—	—
Financial Institutions	—	—	—	—	—	—
	1 056	2 012	797	2 096	712	2 099
Trading book	—	23	—	10	—	16
Total	4 187	5 525	3 874	7 665	4 436	8 569

(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)

	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

(unaudited)
(millions of Canadian dollars)

	2017						2016					
	Q1				Q4				Q3			
	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	563	–	563	99	529	–	529	36	525	–	525	9
Private	323	40	283	70	346	40	306	69	341	40	301	62
	886	40	846	169	875	40	835	105	866	40	826	71

Credit Derivative Positions (notional amounts)



(unaudited)
(millions of Canadian dollars)

	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
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	–	–	–	–	–	–	–	–	–	–	–	–

(unaudited)
(millions of Canadian dollars)

	2017											
	Q1				Q4				2016			
	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
Credit default swaps												
Indices, singles names and other	125	20	1 402	966	60	20	1 188	627	59	20	1 728	1 059
Tranches on indices	–	–	–	–	–	–	–	–	–	–	–	–
Total return swaps	–	–	216	–	–	–	217	–	–	–	239	–
Credit options	–	–	–	–	–	–	27	27	–	–	41	15

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



Derivatives Financial Instruments According to Basel Definition

	2017				2016			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
	Under Basel III							
(unaudited) (millions of Canadian dollars)								
Foreign Exchange Related Contracts								
Swaps	182 196	180 440	182 943	182 895	195 181	185 738	205 355	205 049
Options	- purchased 8 515	7 385	7 105	6 883	7 302	8 387	9 564	10 381
	- sold 8 940	7 689	7 809	6 698	6 990	7 861	9 439	11 660
Exchange traded and OTC futures contracts	29 509	28 518	29 554	31 777	34 832	62 710	28 677	30 470
Total notional amount	229 160	224 032	227 411	228 253	244 305	264 696	253 035	257 560
Replacement cost	- gross 4 368	5 831	4 211	4 248	4 188	3 752	6 054	6 551
	- net ⁽²⁾ 2 512	2 659	2 710	2 347	2 649	2 366	3 154	3 962
Future credit risk	1 892	1 817	1 933	2 009	1 959	2 033	2 086	2 035
Credit equivalent ⁽²⁾	4 404	4 476	4 643	4 356	4 608	4 399	5 240	5 997
Risk-weighted equivalent ⁽³⁾	1 374	1 448	1 284	1 247	1 242	1 291	1 375	1 810
Interest Rate Related Contracts								
Swaps	468 827	440 743	388 737	404 712	398 214	377 655	378 617	437 908
Options	- purchased 20 747	13 016	18 743	18 834	23 527	9 604	13 150	19 424
	- sold 5 044	5 620	14 600	21 887	23 601	5 765	7 831	12 293
Exchange traded and OTC futures contracts	4 733	9 705	6 816	14 899	13 316	7 840	6 480	7 506
Total notional amount	499 351	469 084	428 896	460 332	458 658	400 864	406 078	477 131
Replacement cost	- gross 3 519	3 883	4 426	4 215	5 930	7 629	5 966	7 190
	- net ⁽²⁾ 979	1 005	1 202	1 129	1 353	1 609	1 663	1 648
Future credit risk	1 330	1 420	1 493	1 398	1 402	1 513	1 548	1 606
Credit equivalent ⁽²⁾	2 309	2 425	2 695	2 527	2 755	3 122	3 211	3 254
Risk-weighted equivalent ⁽³⁾	479	488	638	588	774	927	911	875
Financial Futures								
Total notional amount	122 714	72 600	125 581	111 574	116 470	121 080	101 956	108 307
Equity and Commodity Contracts								
Total notional amount	53 923	50 390	54 851	49 932	46 873	46 099	41 417	42 108
Replacement cost	- gross 1 908	1 870	1 878	2 641	2 482	2 712	2 990	3 416
	- net ⁽²⁾ 1 441	1 566	1 567	2 176	2 154	2 447	2 640	3 084
Future credit risk	2 314	2 227	2 505	2 194	2 037	1 899	1 638	1 693
Credit equivalent ⁽²⁾	3 755	3 793	4 072	4 370	4 191	4 346	4 278	4 777
Risk-weighted equivalent ⁽³⁾	306	250	298	368	324	314	515	537
Credit Derivatives								
Total notional amount (trading only) ⁽⁵⁾	8 442	5 373	4 763	2 585	2 086	3 082	2 341	2 164
Total Return Swap Notional Amount ⁽⁴⁾⁽⁵⁾	34 744	32 979	33 160	31 389	30 477	27 900	27 064	25 101
Replacement cost ⁽⁵⁾	- gross 297	258	148	173	104	101	81	90
	- net ⁽²⁾ 41	29	40	33	34	27	42	40
Future credit risk	1 081	1 039	1 047	1 005	982	917	1 001	929
Credit equivalent ⁽²⁾	1 122	1 068	1 087	1 038	1 016	944	1 043	969
Risk-weighted equivalent ⁽³⁾	148	126	121	141	142	122	88	81
Total Derivatives								
Total notional amount	948 334	854 458	874 662	884 065	898 869	863 721	831 891	912 371
Replacement cost	- gross 10 092	11 842	10 663	11 277	12 704	14 194	15 091	17 247
	- net ⁽²⁾ 4 973	5 259	5 519	5 685	6 190	6 449	7 499	8 734
Future credit risk	6 617	6 503	6 978	6 606	6 380	6 362	6 273	6 263
Credit equivalent ⁽²⁾	11 590	11 762	12 497	12 291	12 570	12 811	13 772	14 997
Risk-weighted equivalent ⁽³⁾	2 307	2 312	2 341	2 344	2 482	2 654	2 889	3 303

(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)	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	118 702	83 753	333 309	124 621	149 009	280 124	125 345
Foreign exchange contracts	153	–	229 007	194	–	223 838	91	–	227 319
Equity, commodity and credit derivative contracts ⁽²⁾	21 188	8 893	67 028	22 658	5 703	60 382	21 868	5 094	65 812

(unaudited) (millions of Canadian dollars)	2017				2016				
	Q1			OTC-Traded	Q4			OTC-Traded	
	Exchange-traded contracts	Settled by central counterparties	Not settled by central counterparties	Exchange-traded contracts	Settled by central counterparties	Not settled by central counterparties	Exchange-traded contracts	Settled by central counterparties	
Interest rate contracts	144 792	303 632	123 482	155 838	297 612	121 678	129 581	265 437	126 926
Foreign exchange contracts	459	–	227 794	821	–	243 484	160	–	264 536
Equity, commodity and credit derivative contracts ⁽²⁾	19 567	2 741	61 598	18 658	1 977	58 801	17 778	2 792	56 511

(1) Notional amounts.

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

Aggregate Amount of Securitization Exposures

(unaudited) (millions of Canadian dollars)	2017												2016														
	Q4			Q3			Q2			Q1			Q4			Q3			Q2			Q1					
	Banking Book		Trading book																								
	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	On balance sheet	On balance sheet	Off balance sheet	
Bank's own assets																											
Traditional exposures																											
Insured Mortgage loans																											
Retained ⁽¹⁾																											
Credit Cards																											
Retained ⁽¹⁾																											
Seller's interest																											
Purchased ⁽²⁾																											
Total - Bank's own assets	7 364	381	-	7 253	389	-	8 262	383	-	8 120	329	-	5 759	426	-	4 046	419	-	4 623	391	-	3 673	340	-			
Third party assets																											
Sponsored																											
Traditional exposures ⁽³⁾																											
Residential Mortgages - Insured																											
Residential Mortgages - conventional																											
Fleet Lease Receivables																											
Auto Floorplans																											
Auto Loans																											
Investment Loans																											
Purchased																											
Traditional exposures																											
Insured Mortgage loans - MBS																											
Credit Cards - ABS																											
Home Equity - ABS																											
Commercial mortgage back securities (CMBS)																											
Collateralized debt obligation (CDO)																											
Collateralized mortgage obligation (CMO)																											
Other																											
Synthetic exposures																											
CDX tranches																											
Resecuritized exposures																											
Master Asset Vehicles ⁽⁴⁾																											
Commercial paper not included in the Pan-Canadian restructuring plan																											
Collateralized mortgage obligation (CMO)																											
Total - Third party assets	4 334	2 937	2 373	4 216	3 213	2 345	4 658	2 914	2 215	4 698	2 756	1 929	5 483	2 876	1 761	5 184	2 922	1 244	5 362	2 397	1 468	5 900	2 091	1 470			
Total - Bank	11 698	3 318	2 373	11 469	3 602	2 345	12 920	3 297	2 215	12 818	3 085	1 929	11 242	3 302	1 761	9 230	3 341	1 244	9 985	2 788	1 468	9 573	2 431	1 470			

(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.

(4) Resecuritized exposures comprise the carrying value of the restructured notes held by the Bank and the Bank's committed amount to the margin funding facility related to the MAV.

Capital Requirements for Securitization Exposures Under Securitization Framework⁽¹⁾

(unaudited) (millions of Canadian dollars)	2017											
	Q4						Q3					
	Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book	
	On balance sheet	Off balance sheet										
Bank's own assets⁽²⁾	Exposure Amount	Risk-Weighted Assets										
Credit Cards												
Seller's interest exposure ⁽³⁾	191	119	381	52	—	—	195	119	389	51	—	—
Purchased	480	55	—	—	—	—	479	55	—	—	481	55
Total - Bank's own assets	671	174	381	52	—	—	674	174	389	51	—	—
Third party assets												
Securitized												
7% - 30%	1 324	124	2 937	211	122	9	1 457	141	3 213	228	86	61
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
Total	1 995	298	3 318	263	122	9	2 131	315	3 602	279	86	61

(unaudited) (millions of Canadian dollars)	2016											
	Q1						Q4					
	Banking Book		Trading book		Banking Book		Trading book		Banking Book		Trading book	
	On balance sheet	Off balance sheet										
Bank's own assets⁽²⁾	Exposure Amount	Risk-Weighted Assets										
Credit Cards												
Seller's interest exposure ⁽³⁾	158	103	329	44	—	—	213	136	426	58	—	—
Purchased	478	54	—	—	—	—	89	41	—	—	89	41
Total - Bank's own assets	636	157	329	44	—	—	302	177	426	58	—	—
Third party assets												
Securitized												
7% - 30%	500	36	2 756	214	42	29	490	35	2 876	235	26	21
35% - 100%	—	—	—	—	—	—	—	—	—	—	—	—
150% - 850%	—	—	—	—	—	—	—	—	—	—	—	—
1250 %	—	—	—	—	—	—	—	—	—	—	—	—
Home Equity - ABS	—	—	—	—	—	—	—	—	—	—	—	—
Collateralized mortgage obligation (CMO)	—	—	—	—	—	—	—	—	—	—	—	—
Others	—	—	—	—	—	—	—	—	—	—	—	—
Resecuritized												
7% - 30%	—	—	—	—	—	—	—	—	—	—	—	—
35% - 100%	—	—	—	—	—	—	500	210	—	—	515	216
150% - 850%	—	—	—	—	—	—	113	301	—	—	116	309
1250 %	—	—	—	—	—	—	3	42	—	—	4	46
Master Asset Vehicles	—	—	—	—	—	—	—	—	—	—	—	—
Commercial paper not included in the Pan-Canadian restructuring plan	—	—	—	—	—	—	—	—	—	—	—	—
Collateralized mortgage obligation (CMO)	—	—	—	—	—	—	—	—	—	—	—	—
Total - Third party assets	500	36	2 756	214	42	29	1 106	588	2 876	235	26	21
Total	1 136	193	3 085	258	42	29	1 408	765	3 302	293	26	21

(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



(unaudited)
(millions of Canadian dollars)

	2017										2016				
	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
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

(unaudited)
(millions of Canadian dollars)

	2017										2016				
	Q1					Q4					Q3				
	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
Banking Book															
Insured mortgage loans	21 093	—	—	3 749	—	18 709	—	—	3 134	—	17 123	—	—	1 134	—
Credit card receivables	1 389	8	12	461	—	1 389	8	11	—	—	1 389	8	12	—	—
Total	22 482	8	12	4 210	—	20 098	8	11	3 134	—	18 512	8	12	1 134	—
Trading Book															
Insured mortgage loans	5 850	—	—	383	282	5 631	—	—	1 389	323	4 324	—	—	513	1 045

(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.