



Supplementary Regulatory Capital and Pillar 3 Disclosure

First Quarter 2020

(unaudited)

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

Notes to users

- 1) This *Supplementary Regulatory Capital and Pillar 3 Disclosure* document is unaudited and should be read in conjunction with the 2019 Annual Report. All amounts are in millions of Canadian dollars, unless otherwise stated.
- 2) The information provided in this document is subject to the same level of internal review and internal control processes as the information provided by the Bank for its financial reporting.
- 3) Financial information is available through the Report to Shareholders for all quarters of 2020 and also in the document entitled *Supplementary Financial Information* which are available on the Bank's website at nbc.ca. Prior reporting periods are also available on the Bank's website.
- 4) For certain prescribed tables formats where line or column items have zero balances, such items have not been presented.

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Location of Pillar 3 Disclosure

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	The Bank continues to apply the market risk disclosures under Basel 2.5 framework as permitted by OSFI.		

n.a. Not applicable

(1) Information available on the Bank's website at nbc.ca.

(2) These pages are included in the document entitled *Supplementary Financial Information - First Quarter 2020*

(3) These pages are included in the *Supplementary Regulatory Capital and Pillar 3 Disclosure - Fourth Quarter 2019*

KM2 – Key Metrics – TLAC Requirements⁽¹⁾

(millions of Canadian dollars)

		2020	2019			
		Q1	Q4	Q3	Q2	Q1
		a				
1	Total loss-absorbing capacity (TLAC) available	19,943	16,826	15,378	13,977	12,547
2	Total RWA at the level of the resolution group	86,206	83,039	80,984	79,008	77,036
3	TLAC ratio: TLAC as a percentage of RWA (row 1 / row 2) (%)	23.1%	20.3%	19.0%	17.7%	16.3%
4	Leverage ratio exposure measure at the level of the resolution group	319,709	308,902	303,961	296,118	286,655
5	TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure (row 1 / row 4) (%)	6.2%	5.4%	5.1%	4.7%	4.4%
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	yes	yes	yes	yes	yes
6b	Does the subordination exemption in the penultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	no	no	no	no	no
6c	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with Excluded Liabilities and that is recognised as external TLAC, divided by funding issued that ranks pari passu with Excluded Liabilities and that would be recognised as external TLAC if no cap was applied (%)	n.a.	n.a.	n.a.	n.a.	n.a.

(1) Minimum TLAC ratios will be required starting November 1, 2021. Lines 1, 3 and 5 incorporate the full impact of expected credit loss accounting on regulatory capital. Lines 1a, 3a and 5a have been excluded from this table as OSFI does not provide transitional arrangement for the adoption of IFRS 9 ECL.

OV1 – Overview of RWA⁽¹⁾

(millions of Canadian dollars)

The following table provides an overview of total RWA forming the denominator of the risk-based capital requirements. Further breakdowns of RWA are presented in subsequent parts.

	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019	Q1 2020
	a	b	b	b	b	c
	RWA ⁽¹⁾	Minimum capital requirement ⁽²⁾				
1 Credit risk (excluding counterparty credit risk)	60,155	58,361	56,306	55,225	54,269	4,812
2 Of which: standardised approach (SA)	12,095	10,429	8,911	9,407	8,767	967
3 Of which: foundation internal ratings-based (F-IRB) approach	-	-	-	-	-	-
4 Of which: supervisory slotting approach	-	-	-	-	-	-
5 Of which: advanced internal ratings-based (A-IRB) approach	48,060	47,932	47,395	45,818	45,502	3,845
6 Counterparty credit risk (CCR)	5,341	4,800	5,332	5,234	4,443	427
7 Of which: standardised approach for counterparty credit risk	4,035	3,568	4,060	4,087	3,405	323
8 Of which: internal model method (IMM)	-	-	-	-	-	-
9 Of which: other CCR	1,132	1,071	1,079	966	762	90
9a Of which: exposures to central counterparties	174	161	193	181	276	14
10 Credit valuation adjustment (CVA)	1,364	1,200	1,139	1,151	1,020	109
11 Equity positions under the simple risk weight approach⁽³⁾	1,060	1,121	1,074	943	924	85
12 Equity investments in funds – look-through approach	149	105	121	108	101	12
13 Equity investments in funds – mandate-based approach	-	-	-	-	-	-
14 Equity investments in funds – fall-back approach	-	-	-	86	75	-
15 Settlement risk	70	57	33	94	41	6
16 Securitization exposures in banking book	646	388	455	439	468	51
16a Of which: subject to the transitional arrangement	-	(188)	(188)	(188)	(543)	-
17 Of which: securitization IRB approach (SEC-IRBA)	73	37	40	50	45	6
18 Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	493	463	477	449	966	39
19 Of which: securitization standardised approach (SEC-SA)	80	76	126	128	-	6
20 Market risk	4,397	4,276	3,972	3,788	3,964	352
21 Of which: standardised approach (SA)	916	890	983	927	1,041	73
22 Of which: internal model approach (IMA)	3,481	3,386	2,989	2,861	2,923	279
23 Capital charge for switch between trading book and banking book	-	-	-	-	-	-
24 Operational risk	11,664	11,509	11,319	11,096	10,910	933
25 Amounts below the thresholds for deduction (subject to 250% risk weight)	1,360	1,222	1,233	844	821	109
26 Floor adjustment	-	-	-	-	-	-
27 Total (1+6+10+11+12+13+14+15+16+20+23+24+25+26)	86,206	83,039	80,984	79,008	77,036	6,896

(1) Risk weighted assets including the 1.06 scaling factor.

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

(3) Banking Book Equities that are not equity investments in funds (EIF) are treated under the materiality exemption and consequently reported in OV1 row 11 as the materiality exemption is available for AIRB banks.

L11 – Differences Between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statements with Regulatory Risk Categories⁽¹⁾

(millions of Canadian dollars)

For the following tables columns a) and b) enable users to identify the differences between the scope of accounting consolidation and the scope of regulatory consolidation; and columns c) to g) break down how the amounts reported in banks' financial statements (rows) correspond to regulatory risk categories.

	Q1 2020						
	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Carrying values of items ⁽²⁾ Not subject to capital requirements or subject to deduction from capital
Assets							
Cash and deposits with financial institutions	12,454	12,454	12,454	–	–	344	–
Securities							
At fair value through profit or loss	73,151	75,398	3,520	–	12	71,866	–
At fair value through other comprehensive income	9,488	18,290	18,283	–	7	–	–
At amortized cost	9,660	9,948	8,733	–	1,215	–	–
	92,299	103,636	30,536	–	1,234	71,866	–
Securities purchased under reverse repurchase agreements and securities borrowed	11,689	11,554	–	11,554	–	–	–
Loans and acceptances							
Residential mortgage	58,497	32,741	32,741	–	–	–	–
Personal	36,845	36,845	36,845	–	–	–	–
Credit card	2,255	2,255	666	–	653	–	936
Business and government	52,376	52,376	52,376	–	14	378	–
Customers' liability under acceptances	149,973	124,217	122,628	–	667	378	936
Allowances for credit losses	6,871	6,871	6,871	–	–	–	–
	(693)	(205)	(205)	–	–	–	–
	156,151	130,883	129,294	–	667	378	936
Other							
Derivative financial instruments ⁽³⁾	8,965	9,180	–	9,180	–	7,948	–
Investments in associates and joint ventures	387	438	438	–	–	–	–
Premises and equipment	1,155	1,155	1,155	–	–	–	–
Goodwill	1,413	1,511	–	–	–	–	1,511
Intangible assets	1,420	1,160	–	–	–	–	1,160
Other assets	3,258	3,206	3,199	–	–	–	7
	16,598	16,650	4,792	9,180	–	7,948	2,678
Total assets	289,191	275,177	177,076	20,734	1,901	80,536	3,614
Liabilities							
Deposits	197,504	197,504	–	–	–	9,924	187,580
Other							
Acceptances	6,871	6,871	–	–	–	–	6,871
Obligations related to securities sold short	12,263	12,263	–	–	–	12,263	–
Obligations related to securities sold under repurchase agreements and securities loaned	22,054	21,536	–	21,536	–	–	518
Derivative financial instruments ⁽³⁾	6,982	7,606	–	7,606	–	6,137	–
Liabilities related to transferred receivables	20,824	20,824	–	–	–	–	20,824
Other liabilities	6,498	6,498	–	–	–	–	6,498
	75,492	75,598	–	29,142	–	18,400	34,711
Subordinated debt	774	774	–	–	–	–	774
Total liabilities	273,770	273,876	–	29,142	–	28,324	223,065

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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 sum of amounts in columns c) to g) may not equal the amounts in column b) as some items may be subject to regulatory capital charges in more than one risk category.

(3) Derivatives financial instruments are subject to both counterparty credit risk and market risk frameworks.

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

(millions of Canadian dollars)

The following table provides information on the main sources of differences (other than due to different scopes of consolidation which are shown in table LI1) between the financial statements' carrying value amounts and the exposure amounts used for regulatory purposes.

		Q1 2020				
		a	b	c	d	e
		Total	Items subject to ⁽¹⁾ :			Market risk framework
			Credit risk framework	Securitization framework	Counterparty credit risk framework	
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	271,563	177,076	1,901	20,734	80,536
2	Liabilities carrying value amount under scope of regulatory consolidation (as per template LI1)	50,811	–	–	29,142	28,324
3	Total net amount under regulatory scope of consolidation	220,752	177,076	1,901	(8,408)	52,212
4	<i>Gross-up for repo-style transactions⁽²⁾</i>	43,072	–	–	43,072	–
5	<i>Potential future exposures (PFE)⁽³⁾</i>	12,578	–	–	12,578	–
6	<i>Off-balance sheet amounts⁽⁴⁾</i>	208,541	46,029	3,136	131,321	–
7	<i>Differences due to different netting rules, other than those already included in row 2 including collateral</i>	1,899	–	–	1,899	–
8	VaR amounts for Securities Financing Transactions (SFTs)	4,236	–	–	4,236	–
9	<i>Differences in valuations</i>	–	–	–	–	–
10	<i>Collateral for SFTs</i>	(160,004)	–	–	(160,004)	–
11	Exposure amounts considered for regulatory purposes⁽⁵⁾	331,074	223,105	5,037	24,694	52,212

(1) The sum of amounts in columns b) to e) may not equal the amounts in column a) as some items may be subject to regulatory capital charges in more than one risk category.

(2) Is equal to two times the Obligations related to securities sold under repurchase agreements and securities loaned subject to counterparty credit risk framework from table LI1.

(3) The PFE amount is presented after the alpha of 1.4.

(4) Original off-balance sheet amounts are presented in column (a) while in columns (b) through [e] exposures are after application of credit conversion factors (CCFs).

(5) The aggregate amount considered as a starting point of the RWA calculation.

CC1 – Composition of Regulatory Capital

(millions of Canadian dollars)

		2020		2019			
		Q1	Q4	Q3	Q2	Q1	
		Reference ⁽¹⁾					
Common Equity Tier 1 capital: instruments and reserves							
1	Directly issued qualifying common share capital plus related contributed surplus ⁽²⁾	a + a'	3,072	3,000	2,967	2,953	2,933
2	Retained earnings	b	9,556	9,312	9,044	8,889	8,695
3	Accumulated other comprehensive income and other reserves	c	(7)	16	59	50	65
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)		–	–	–	–	–
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	d	–	–	22	18	15
6	Common Equity Tier 1 capital before regulatory adjustments		12,621	12,328	12,092	11,910	11,708
Regulatory adjustments to Common Equity Tier 1 capital							
7	Prudential valuation adjustments		–	–	–	–	–
8	Goodwill (net of related tax liability)	e - w	(1,511)	(1,510)	(1,510)	(1,675)	(1,671)
9	Intangible assets other than mortgage-servicing rights	f - x	(1,160)	(1,148)	(1,111)	(1,177)	(1,139)
10	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	g	–	–	–	–	–
11	Accumulated other comprehensive income related to cash flow hedges	h	47	6	(32)	6	(48)
12	Shortfall of total provisions to expected losses	i	–	–	–	–	–
13	Securitisation gain on sale		–	–	–	–	–
14	Gains (losses) due to changes in own credit risk on fair valued liabilities	j	56	24	41	35	(23)
15	Defined benefit pension plan assets (net of related tax liability)	k - y	(7)	(8)	(5)	(7)	(5)
16	Investments in own shares (if not already netted off contributed surplus on reported balance sheet)		–	–	–	–	–
17	Reciprocal cross holdings in common equity		–	–	–	–	–
18	Non-significant investments in capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	l	–	–	–	–	–
19	Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	m	–	–	–	–	–
20	Mortgage servicing rights (amount above 10% threshold)		–	–	–	–	–
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)		–	–	–	–	–
22	Amount exceeding the 15% threshold		–	–	–	–	–
23	of which: significant investments in the common stock of financials	n	–	–	–	–	–
24	of which: mortgage servicing rights		–	–	–	–	–
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)		–	–	–	–	–
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		–	–	–	–	–
28	Total regulatory adjustments to Common equity Tier 1		(2,575)	(2,636)	(2,617)	(2,818)	(2,886)
29	Common Equity Tier 1 capital (CET1)		10,046	9,692	9,475	9,092	8,822
Additional Tier 1 capital: instruments							
30	Directly issued qualifying Additional Tier 1 instruments plus related contributed surplus ⁽²⁾	v + z	2,450	2,450	2,450	2,450	2,450
31	of which: classified as equity under applicable accounting standards		2,450	2,450	2,450	2,450	2,450
32	of which: classified as liabilities under applicable accounting standards	p	–	–	–	–	–
33	Directly issued capital instruments subject to phase out from Additional Tier 1 ⁽²⁾	v' + z' + p'	350	350	350	350	350
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	–	–	5	4	3
35	of which: instruments issued by subsidiaries subject to phase out		–	–	–	–	–
36	Additional Tier 1 capital before regulatory adjustments		2,800	2,800	2,805	2,804	2,803

(1) Reconciliation with Balance Sheet is presented on pages 12 to 13.

(2) 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*.

CC1 – Composition of Regulatory Capital (continued)

(millions of Canadian dollars)

		2020		2019		
		Q1	Q4	Q3	Q2	Q1
		Reference ⁽¹⁾				
Additional Tier 1 capital: regulatory adjustments						
37	Investments in own Additional Tier 1 instruments	-	-	-	-	-
38	Reciprocal cross holdings in Additional Tier 1 instruments	-	-	-	-	-
39	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	-	-	-	-	-
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	-	-	-	-	-
41	Other deductions from Tier 1 capital as determined by OSFI	-	-	-	-	(1)
41a	of which: Reverse mortgages	-	-	-	-	(1)
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	-	-	-	-	-
43	Total regulatory adjustments to Additional Tier 1 capital	-	-	-	-	(1)
44	Additional Tier 1 capital (AT1)	2,800	2,800	2,805	2,804	2,802
45	Tier 1 capital (T1 = CET1 + AT1)	12,846	12,492	12,280	11,896	11,624
Tier 2 capital: instruments and allowances						
46	Directly issued qualifying Tier 2 instruments plus related contributed surplus ⁽²⁾	r	750	750	750	750
47	Directly issued capital instruments subject to phase out from Tier 2 ⁽²⁾	r'	9	9	9	9
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	-	-	6	5
49	of which: instruments issued by subsidiaries subject to phase out	-	-	-	-	-
50	Allowances for credit losses	t	205	189	185	188
51	Tier 2 capital before regulatory adjustments		964	948	948	951
Tier 2 capital: regulatory adjustments						
52	Investments in own Tier 2 instruments	-	-	-	-	-
53	Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments	-	-	-	-	-
54	Non-significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation, where the institution does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)		(55)	(74)	(35)	(55)
54a	[Reporting row for G-SIBs and D-SIBs only] Non-significant investments in the other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs, where the institution does not own more than 10% of the issued common share capital of the entity: amount previously designated for the 5% threshold but no longer meets the conditions		(55)	(74)	(35)	(55)
55	Significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation		-	-	-	-
56	Other deductions from Tier 2 capital		-	-	-	-
57	Total regulatory adjustments to Tier 2 capital		(55)	(74)	(35)	(55)
58	Tier 2 capital (T2)		909	874	913	894
59	Total capital (TC = T1 + T2)		13,755	13,366	13,193	12,790

(1) Reconciliation with Balance Sheet is presented on pages 12 to 13.

(2) 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*.

CC1 – Composition of Regulatory Capital (continued)

(millions of Canadian dollars)

		2020	2019			
		Q1	Q4	Q3	Q2	Q1
60	Total risk-weighted assets	86,206	83,039	80,984	79,008	77,036
60a	Common Equity Tier 1 Capital RWA (CET1)	86,206	83,039	80,984	79,008	77,036
60b	Tier 1 Capital RWA	86,206	83,039	80,984	79,008	77,036
60c	Total capital RWA	86,206	83,039	80,984	79,008	77,036
Capital ratios						
61	Common Equity Tier 1 (as a percentage of risk weighted assets)	11.7%	11.7%	11.7%	11.5%	11.5%
62	Tier 1 (as a percentage of risk weighted assets)	14.9%	15.0%	15.2%	15.1%	15.1%
63	Total capital (as a percentage of risk weighted assets)	16.0%	16.1%	16.3%	16.2%	16.3%
64	Institution-specific buffer requirement (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer requirement plus D-SIB buffer requirement expressed as a percentage of risk weighted assets)	8.0%	8.0%	8.0%	8.0%	8.0%
65	of which: capital conservation buffer requirement	2.5%	2.5%	2.5%	2.5%	2.5%
66	of which: bank-specific countercyclical buffer	0.0%	0.0%	0.0%	0.0%	0.0%
67	of which: G-SIB buffer requirement	n.a.	n.a.	n.a.	n.a.	n.a.
67a	of which: D-SIBs buffer requirement	1.0%	1.0%	1.0%	1.0%	1.0%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk weighted assets)	11.7%	11.7%	11.7%	11.5%	11.5%
OSFI target (minimum + capital conservation buffer + D-SIB buffer)⁽¹⁾						
69	Common Equity Tier 1 all-in target ratio	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%
71	Total capital all-in target ratio	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 and other TLAC-eligible instruments of other financial entities	436	527	530	551	549
73	Significant investments in the common stock of financials	340	318	339	301	287
74	Mortgage servicing rights (net of related tax liability)	–	–	–	–	–
75	Deferred tax assets arising from temporary differences (net of related tax liabilities)	204	171	154	37	42
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)	92	81	71	71	70
77	Cap on inclusion of allowances in Tier 2 under standardised approach	139	118	103	102	97
78	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	113	108	112	114	118
79	Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	354	347	345	336	326
Capital instruments subject to phase-out arrangements (only applicable between January 1, 2013 and January 1, 2022)						
80	Current cap on CET1 instruments subject to phase out arrangements	–	–	–	–	–
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	–	–	–	–	–
82	Current cap on AT1 instruments subject to phase out arrangements	387	581	581	581	581
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	476	715	715	715	715
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	–	–	–	–	–

(1) Do not include the domestic stability buffer.

CC2 – Reconciliation of Regulatory Capital to Balance Sheet⁽¹⁾

(millions of Canadian dollars)

	Q1 2020		
	Cross - Reference to Definition of Capital ⁽²⁾	As in Report to Shareholders	Under scope of regulatory consolidation
Assets			
Cash and deposits with financial institutions		12,454	12,454
Securities		92,299	103,636
Non-significant investments in capital of other financial institutions reflected in regulatory capital	l	–	–
Other securities		92,299	103,636
Assets purchased under reverse repurchase agreements and securities borrowed		11,689	11,554
Loans			
Residential mortgage		58,497	32,741
Personal		36,845	36,845
Credit card		2,255	2,255
Business and government		52,376	52,376
Customers' liability under acceptances		6,871	6,871
Less: Allowances for credit losses		(693)	(205)
Allowance reflected in Tier 2 regulatory capital	t	–	(205)
Shortfall of allowances to expected loss	i	–	–
Allowances not reflected in regulatory capital		–	(488)
Other assets			
Derivative financial instruments		8,965	9,180
Other		7,633	7,470
Goodwill	e	–	1,511
Intangibles assets	f	–	1,420
Deferred tax assets		–	825
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		–	620
Deferred tax assets - other temporary differences		–	205
Defined-benefit pension fund net assets	k	–	10
Significant investments in other financial institutions		–	340
Significant investments exceeding regulatory thresholds	m + n	–	–
Significant investments not exceeding regulatory thresholds		–	340
Other		–	3,364
Total assets		289,191	275,177

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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. Total assets of National Bank Life Insurance Company and other insurance subsidiaries are \$173 million and \$16 million respectively.

(2) The references identify balance sheet components which are used in calculation of regulatory capital on pages 9 to 11.

CC2 – Reconciliation of Regulatory Capital to Balance Sheet⁽¹⁾ (continued)

(millions of Canadian dollars)

	Q1 2020		
	Cross - Reference to Definition of Capital ⁽²⁾	As in Report to Shareholders	Under scope of regulatory consolidation
Liabilities			
Deposits		197,504	197,504
Derivatives financial instruments		6,982	7,606
Other liabilities		68,510	67,992
Gains and losses due to changes in own credit risk on fair value liabilities	j	–	(56)
Deferred tax liabilities		–	–
Related to goodwill	w	–	–
Related to intangibles	x	–	260
Related to pensions	y	–	3
Other deferred tax liabilities		–	(263)
Other		–	68,048
Subordinated debt		774	774
Regulatory capital amortization of maturing debentures		–	–
Fair value adjustment and unamortized issuance cost		–	15
Subordinated debentures not allowed for regulatory capital	s	–	–
Subordinated debentures used for regulatory capital		–	759
Allowed for inclusion in Tier 2 capital	r	–	750
Subject to phase out	r'	–	9
Total liabilities		273,770	273,876
Equity Attributable to Shareholders		15,071	15,071
Common shares	a	–	3,028
Contributed surplus	a'	–	44
Retained earnings	b	–	9,556
Accumulated Other Comprehensive Income (loss)	c	–	(7)
Net gains (losses) on instruments designated as cash flow hedges	h	–	(47)
Net foreign currency translation adjustments		–	14
Other		–	26
Preferred shares		–	2,450
of which: are qualifying	v	–	2,450
of which: are subject to phase out	v'	–	–
Non-controlling interest		350	352
Innovative instruments		–	352
of which: are qualifying		–	–
of which: are subject to phase out	p'	–	350
Other		–	2
Portion allowed for inclusion into CET1	d	–	–
Portion allowed for inclusion into Tier 1 capital	q	–	–
Portion allowed for inclusion into Tier 2 capital	s	–	–
Portion not allowed for regulatory capital		–	–
Total Equity		15,421	15,423
Total Liabilities and Equity		289,191	289,299

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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. Total assets of National Bank Life Insurance Company and other insurance subsidiaries are \$173 million and \$16 million respectively.

(2) The references identify balance sheet components which are used in calculation of regulatory capital on pages 9 to 11.

TLAC1 – TLAC Composition⁽¹⁾

(millions of Canadian dollars)

		2020	2019			
		Q1	Q4	Q3	Q2	Q1
Regulatory capital elements of TLAC and adjustments						
1	Common Equity Tier 1 capital (CET1)	10,046	9,692	9,475	9,092	8,822
2	Additional Tier 1 capital (AT1) before TLAC adjustments	2,800	2,800	2,805	2,804	2,803
3	AT1 ineligible as TLAC as issued out of subsidiaries to third parties ⁽²⁾	-	-	-	-	-
4	Other adjustments	-	-	-	-	(1)
5	AT1 instruments eligible under the TLAC framework	2,800	2,800	2,805	2,804	2,802
6	Tier 2 capital (T2) before TLAC adjustments	964	948	948	949	951
7	Amortised portion of T2 instruments where remaining maturity > 1 year	-	-	-	-	-
8	T2 capital ineligible as TLAC as issued out of subsidiaries to third parties ⁽²⁾	-	-	-	-	-
9	Other adjustments	(55)	(74)	(35)	(55)	(28)
10	T2 instruments eligible under the TLAC framework	909	874	913	894	923
11	TLAC arising from regulatory capital	13,755	13,366	13,193	12,790	12,547
Non-regulatory capital elements of TLAC						
12	External TLAC instruments issued directly by the bank and subordinated to excluded liabilities	-	-	-	-	-
13	External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements	6,259	3,467	2,185	1,196	-
14	Of which: amount eligible as TLAC after application of the caps	-	-	-	-	-
15	External TLAC instruments issued by funding vehicles prior to January 1, 2022	-	-	-	-	-
16	Eligible ex ante commitments to recapitalise a G-SIB in resolution	-	-	-	-	-
17	TLAC arising from non-regulatory capital instruments before adjustments	6,259	3,467	2,185	1,196	-
Non-regulatory capital elements of TLAC: adjustments						
18	TLAC before deductions	20,014	16,833	15,378	13,986	12,547
19	Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs and D-SIBs)	-	-	-	-	-
20	Deduction of investments in own other TLAC liabilities	(71)	(7)	-	(9)	-
21	Other adjustments to TLAC	-	-	-	-	-
22	TLAC available after deductions	19,943	16,826	15,378	13,977	12,547
Risk-weighted assets and leverage exposure measure for TLAC purposes						
23	Total risk-weighted assets adjusted as permitted under the TLAC regime	86,206	83,039	80,984	79,008	77,036
24	Leverage exposure measure	319,709	308,902	303,961	296,118	286,655
TLAC ratios and buffers						
25	TLAC ratio (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	23.1%	20.3%	19.0%	17.7%	16.3%
26	TLAC Leverage ratio (as a percentage of leverage exposure)	6.2%	5.4%	5.1%	4.7%	4.4%
27	CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements	n.a.	n.a.	n.a.	n.a.	n.a.
28	Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer plus higher loss absorbency, expressed as a percentage of risk-weighted assets)	3.5%	3.5%	3.5%	3.5%	3.5%
29	Of which: capital conservation buffer	2.5%	2.5%	2.5%	2.5%	2.5%
30	Of which: bank specific countercyclical buffer	-	-	-	-	-
31	Of which: D-SIB \ G-SIB buffer	1.0%	1.0%	1.0%	1.0%	1.0%

(1) Minimum TLAC ratios will be required starting November 1, 2021.

(2) AT1 and T2 capital issued out of subsidiaries to third parties will be eligible as TLAC up to January 1, 2022.

TLAC3 – Creditor Ranking at Legal Entity Level⁽¹⁾

(millions of Canadian dollars)

		Q1 2020						Q4 2019					
		Creditor ranking					Sum (1 to 5)	Creditor ranking					Sum (1 to 5)
		1	2	3	4 ⁽²⁾	5 ⁽³⁾		1	2	3	4 ⁽²⁾	5 ⁽³⁾	
		Most junior			Most senior			Most junior			Most senior		
1	Description of creditor ranking	Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt		Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt	
2	Total capital and liabilities net of credit risk mitigation	3,028	2,450	759	6,265	–	12,502	2,949	2,450	759	3,467	–	9,625
3	Subset of row 2 that are excluded liabilities	–	–	–	77	–	77	–	–	–	7	–	7
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	3,028	2,450	759	6,188	–	12,425	2,949	2,450	759	3,460	–	9,618
5	Subset of row 4 that are potentially eligible as TLAC	3,028	2,450	759	6,188	–	12,425	2,949	2,450	759	3,460	–	9,618
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	–	–	–	684	–	684	–	–	–	682	–	682
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	–	–	–	4,536	–	4,536	–	–	–	2,778	–	2,778
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	–	–	750	776	–	1,526	–	–	750	–	–	750
9	Subset of row 5 residual maturity ≥ 10 years, but excluding perpetual securities	–	–	9	192	–	201	–	–	9	–	–	9
10	Subset of row 5 that is perpetual securities	3,028	2,450	–	–	–	5,478	2,949	2,450	–	–	–	5,399

		Q3 2019						Q2 2019					
		Creditor ranking					Sum (1 to 5)	Creditor ranking					Sum (1 to 5)
		1	2	3	4 ⁽²⁾	5 ⁽³⁾		1	2	3	4 ⁽²⁾	5 ⁽³⁾	
		Most junior			Most senior			Most junior			Most senior		
1	Description of creditor ranking	Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt		Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt	
2	Total capital and liabilities net of credit risk mitigation	2,914	2,450	759	2,185	–	8,308	2,901	2,450	759	1,196	–	7,306
3	Subset of row 2 that are excluded liabilities	–	–	–	–	–	–	–	–	–	9	–	9
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	2,914	2,450	759	2,185	–	8,308	2,901	2,450	759	1,187	–	7,297
5	Subset of row 4 that are potentially eligible as TLAC	2,914	2,450	759	2,185	–	8,308	2,901	2,450	759	1,187	–	7,297
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	–	–	–	682	–	682	–	–	–	696	–	696
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	–	–	–	1,503	–	1,503	–	–	–	491	–	491
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	–	–	750	–	–	750	–	–	750	–	–	750
9	Subset of row 5 residual maturity ≥ 10 years, but excluding perpetual securities	–	–	9	–	–	9	–	–	9	–	–	9
10	Subset of row 5 that is perpetual securities	2,914	2,450	–	–	–	5,364	2,901	2,450	–	–	–	5,351

(1) This table provides creditors of the legal entity National Bank of Canada with information regarding their ranking in its liabilities structure.

(2) Bail-in Debt is reflected as subordinated to Other Liabilities. Under the Bail-in Regime, Bail-in Debt which would ordinarily rank equally to Other Liabilities in liquidation, is subject to conversion under statutory resolution powers whereas Other Liabilities are not subject to such conversion.

(3) OSFI doesn't require to complete this column at this time.

LR1 – Summary Comparison of Accounting Assets vs Leverage Ratio Exposure Measure

(millions of Canadian dollars)

	2020	2019			
	Q1	Q4	Q3	Q2	Q1
Accounting assets vs. leverage ratio exposure					
1 Total consolidated assets as per published financial statements	289,191	281,458	276,312	269,106	263,355
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	25	3	28	4	(3)
3 Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference ⁽¹⁾	(898)	(897)	(894)	(890)	(904)
4 Adjustment for fiduciary assets recognised on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	–	–	–	–	–
5 Adjustment for derivative financial instruments ⁽²⁾	6,458	5,873	5,237	5,814	3,808
6 Adjustment for securities financing transactions (i.e. repos and similar secured lending) ⁽²⁾	4,754	3,164	4,052	3,278	1,920
7 Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	24,555	24,141	23,436	22,940	23,050
8 Other adjustments	(4,376)	(4,840)	(4,210)	(4,134)	(4,571)
9 Leverage Ratio Exposure	319,709	308,902	303,961	296,118	286,655

(1) OSFI's October 2018 Leverage Requirements Guideline now allows for the exclusion of securitized exposures that meet the operational requirements for risk transference.

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

LR2 – Leverage Ratio Common Disclosure Template

(millions of Canadian dollars)

		2020	2019			
		Q1	Q4	Q3	Q2	Q1
Leverage ratio common disclosure						
On-balance sheet exposures						
1	On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	267,659	254,653	252,885	243,584	239,966
2	Gross-up for derivatives collateral provided where deducted from balance sheet assets pursuant to the operative accounting framework	–	–	–	–	–
3	(Deductions of receivables assets for cash variation margin provided in derivative transactions)	(1,740)	(2,120)	(1,434)	(1,113)	(1,544)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	(2,631)	(2,661)	(2,659)	(2,852)	(2,865)
5	Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 to 4)	263,288	249,872	248,792	239,619	235,557
Derivative exposures						
6	Replacement cost associated with all derivative transactions (where applicable net of eligible cash variation margin and/or with bilateral netting)	3,408	2,868	3,095	3,007	2,483
7	Add-on amounts for PFE associated with all derivative transactions	11,995	11,115	10,638	10,058	8,463
8	(Exempted CCP leg of client-cleared trade exposures)	–	–	–	–	–
9	Adjusted effective notional amount of written credit derivatives	20	19	20	23	20
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–	–	–	–	–
11	Total derivative exposures (sum of rows 6 to 10)	15,423	14,002	13,753	13,088	10,966
Securities financing transaction exposures						
12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	11,689	17,723	13,928	17,193	15,162
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(520)	(1,038)	(883)	(662)	(2,063)
14	CCR exposure for SFTs assets	5,274	4,202	4,935	3,940	3,983
15	Agent transaction exposures	–	–	–	–	–
16	Total securities financing transaction exposures (sum of rows 12 to 15)	16,443	20,887	17,980	20,471	17,082
Other off-balance sheet exposures						
17	Off-balance sheet exposure at gross notional amount	76,692	75,558	72,873	71,962	71,491
18	(Adjustments for conversion to credit equivalent amounts)	(52,137)	(51,417)	(49,437)	(49,022)	(48,441)
19	Off-balance sheet items (sum of rows 17 and 18)	24,555	24,141	23,436	22,940	23,050
Capital and Total Exposures						
20	Tier 1 capital	12,846	12,492	12,280	11,896	11,624
21	Total Exposures (sum of rows 5, 11, 16 and 19)	319,709	308,902	303,961	296,118	286,655
Leverage Ratio						
22	Basel III leverage ratio	4.0%	4.0%	4.0%	4.0%	4.1%

CR1 – Credit Quality of Assets⁽¹⁾

(millions of Canadian dollars)

The following tables provide a comprehensive picture of the credit quality of a bank's (on- and off-balance sheet) assets.

		Q1 2020							Q4 2019						
		a	b	c	d	e	f	g	a	b	c	d	e	f	g
		Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures ⁽⁵⁾		Of which ECL accounting provisions for credit losses on IRB exposures ⁽⁵⁾	Net values (a+b-c)	Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures ⁽⁵⁾		Of which ECL accounting provisions for credit losses on IRB exposures ⁽⁵⁾	Net values (a+b-c)
		Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General			Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General		
1	Loans ⁽⁶⁾	653	140,102	695	22	27	646	140,060	656	137,240	680	22	32	626	137,216
2	Debt Securities	–	29,100	1	–	–	1	29,099	–	21,740	1	–	–	1	21,739
3	Off-balance-sheet commitments ⁽⁷⁾	24	73,957	73	–	3	70	73,908	25	72,829	74	–	2	72	72,780
4	Total	677	243,159	769	22	30	717	243,067	681	231,809	755	22	34	699	231,735

		Q3 2019							Q2 2019						
		a	b	c	d	e	f	g	a	b	c	d	e	f	g
		Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures ⁽⁵⁾		Of which ECL accounting provisions for credit losses on IRB exposures ⁽⁵⁾	Net values (a+b-c)	Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures ⁽⁵⁾		Of which ECL accounting provisions for credit losses on IRB exposures ⁽⁵⁾	Net values (a+b-c)
		Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General			Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General		
1	Loans ⁽⁶⁾	636	133,921	688				133,869	596	129,857	684				129,769
2	Debt Securities	–	18,382	1				18,381	–	16,360	1				16,359
3	Off-balance-sheet commitments ⁽⁷⁾	14	70,027	76				69,965	24	69,391	62				69,353
4	Total	650	222,330	765				222,215	620	215,608	747				215,481

(1) Excluding insurances subsidiaries and securitization exposures.

(2) Gross carrying values of on- and off-balance sheet items that give rise to a credit risk exposure according to the Basel framework (gross of CCF or CRM techniques).

(3) Definition of default as per the CAR guidelines.

(4) Represent allowances for credit losses according to IFRS 9.

(5) Following the BCBS Technical Amendments to Pillar 3 disclosure requirements and as required by OSFI, allowance for credit losses granularity is presented on a prospective basis, starting Q4 2019.

(6) Including deposits with financial institutions.

(7) For completeness purposes, revocable commitments are included.

CR2 – Changes in Stock of Defaulted Loans and Debt Securities

(millions of Canadian dollars)

The following table identifies the change in a bank's stock of defaulted exposures, the flows between non-defaulted and defaulted exposure categories and reductions in the stock of defaulted exposures due to write-offs.

	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
	a	a	a	a	a
1 Defaulted loans ⁽¹⁾ and debt securities at beginning	656	636	596	572	593
2 Loans and debt securities that have defaulted since the last reporting period	245	255	246	200	226
3 Returned to non-defaulted status since the last reporting period	(35)	(32)	(48)	(32)	(47)
4 Amounts written off	(85)	(108)	(78)	(80)	(85)
5 Other changes ⁽²⁾	(128)	(95)	(80)	(64)	(115)
6 Defaulted loans⁽¹⁾ and debt securities at end	653	656	636	596	572

(1) Including deposits with financial institutions.

(2) Including net repayments and foreign exchange movements.

CR3 – Credit Risk Mitigation Techniques – Overview

(millions of Canadian dollars)

The following tables disclose the extent of use of credit risk mitigation techniques.

		Q1 2020					Q4 2019				
		a	b1	b	d	f	a	b1	b	d	f
		Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives	Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans ⁽²⁾	78,604	62,124	52,964	3,126	–	74,199	63,670	61,023	2,516	–
2	Debt securities	29,100	–	–	–	–	21,740	–	–	–	–
3	Total	107,704	62,124	52,964	3,126	–	95,939	63,670	61,023	2,516	–
4	Of which defaulted	378	229	174	32	–	388	207	178	27	–

		Q3 2019					Q2 2019				
		a	b1	b	d	f	a	b1	b	d	f
		Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives	Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans ⁽²⁾	70,646	63,885	58,392	5,388	–	68,496	61,937	56,564	5,279	–
2	Debt securities	18,382	–	–	–	–	16,360	–	–	–	–
3	Total	89,028	63,885	58,392	5,388	–	84,856	61,937	56,564	5,279	–
4	Of which defaulted	339	227	195	30	–	332	239	206	31	–

(1) Carrying amounts of on-balance sheet exposures are net of all three ECL Stages.

(2) Including deposits with financial institutions.

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

(millions of Canadian dollars)

	2020						2019												
	Q1						Q4						Q3						
	EAD - Gross Exposure ⁽¹⁾																		
	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	
Non-Retail Portfolio																			
Agriculture	5,574	332	4	-	-	5,910	5,437	337	4	-	-	5,778	5,294	327	4	-	-	5,625	
Oil & Gas and Pipelines	4,248	3,570	315	-	-	8,133	4,326	3,601	284	-	-	8,211	4,249	3,554	283	-	-	8,086	
<i>Oil and Gas</i>	2,580	2,096	142	-	-	4,818	2,799	2,070	143	-	-	5,012	2,819	2,194	143	-	-	5,156	
<i>Pipelines & Other</i>	1,668	1,474	173	-	-	3,315	1,527	1,531	141	-	-	3,199	1,430	1,360	140	-	-	2,930	
Mining	663	1,101	172	-	-	1,936	669	1,081	159	-	-	1,909	770	917	153	-	-	1,840	
Utilities	3,976	2,932	916	-	-	7,824	3,807	2,435	775	-	-	7,017	3,444	2,274	786	-	-	6,504	
Construction Non-Real Estate ⁽²⁾	1,093	1,208	71	-	-	2,372	1,387	1,188	87	-	-	2,662	1,442	983	102	-	-	2,527	
Manufacturing	6,266	2,152	315	-	-	8,733	6,250	2,036	217	-	-	8,503	6,086	2,101	207	-	-	8,394	
Wholesale	2,203	771	46	-	-	3,020	2,137	851	47	-	-	3,035	2,217	739	54	-	-	3,010	
Retail	3,203	1,170	53	-	-	4,426	3,202	1,172	47	-	-	4,421	3,214	1,259	45	-	-	4,518	
Transportation	1,623	937	71	242	-	2,873	1,694	845	80	39	-	2,658	1,581	750	74	14	-	2,419	
Communications	1,379	883	200	-	-	2,462	1,553	936	200	-	-	2,689	1,634	856	200	-	-	2,690	
Finance and Insurance	30,697	4,174	1,103	148,504	1,864	186,342	34,318	4,102	1,335	138,430	1,982	180,167	32,076	4,069	1,582	135,303	1,676	174,706	
Real Estate and Construction																			
Real Estate ⁽³⁾	11,884	3,065	209	-	-	15,158	11,083	2,961	247	-	-	14,291	11,198	2,889	250	-	-	14,337	
Professional Services	1,681	779	386	-	-	2,846	1,624	760	363	-	-	2,747	1,809	683	356	-	-	2,848	
Education & Health Care	3,268	1,148	7	2	-	4,425	3,393	1,150	7	1	-	4,551	3,352	1,318	8	1	-	4,679	
Other Services	5,782	1,375	450	-	-	7,607	4,880	1,248	398	-	-	6,526	4,691	1,313	381	6	-	6,391	
Government	9,614	1,520	3	18,511	154	29,802	9,127	1,437	3	15,320	175	26,062	7,795	1,322	3	16,780	205	26,105	
Other	8,608	46	771	1,388	-	10,813	6,966	34	627	1,365	-	8,992	4,828	33	342	1,056	-	6,259	
Total – Non-retail⁽⁴⁾	101,762	27,163	5,092	168,647	2,018	304,682	101,853	26,174	4,880	155,155	2,157	290,219	95,680	25,387	4,830	153,160	1,881	280,938	

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

(2) Including civil engineering loans, public-private partnership loans, and project finance loans.

(3) Including residential mortgages on dwellings of five or more units.

(4) This total excludes SME retail exposure.

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

(millions of Canadian dollars)

	2019												2018						
	Q2						Q1						Q4						
	EAD - Gross Exposure ⁽¹⁾																		
	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	
Non-Retail Portfolio																			
Agriculture	5,080	316	4	-	-	5,400	4,919	288	4	-	-	5,211	4,794	321	4	-	-	5,119	
Oil & Gas and Pipelines	3,974	3,557	275	-	-	7,806	4,445	3,402	253	-	-	8,100	4,131	3,384	245	-	-	7,760	
<i>Oil and Gas</i>	2,659	2,158	147	-	-	4,964	2,792	2,035	147	-	-	4,974	2,582	2,058	151	-	-	4,791	
<i>Pipelines & Other</i>	1,315	1,399	128	-	-	2,842	1,653	1,367	106	-	-	3,126	1,549	1,326	94	-	-	2,969	
Mining	687	937	135	-	-	1,759	915	976	146	-	-	2,037	959	878	137	-	-	1,974	
Utilities	3,672	2,169	790	-	-	6,631	3,239	1,910	774	-	-	5,923	3,145	1,861	754	-	-	5,760	
Construction Non-Real Estate ⁽²⁾	1,393	867	118	-	-	2,378	1,215	585	109	-	-	1,909	1,236	427	122	-	-	1,785	
Manufacturing	5,878	2,151	218	-	-	8,247	5,294	1,999	217	-	-	7,510	5,283	1,878	233	-	-	7,394	
Wholesale	2,593	603	56	-	-	3,252	2,092	700	55	-	-	2,847	2,102	693	52	-	-	2,847	
Retail	3,333	1,162	44	-	-	4,539	3,349	1,018	46	-	-	4,413	2,970	1,052	43	-	-	4,065	
Transportation	1,537	775	71	8	-	2,391	1,514	1,066	69	19	-	2,668	1,488	1,070	71	31	-	2,660	
Communications	1,394	882	627	-	-	2,903	1,560	816	819	-	-	3,195	1,608	644	193	-	-	2,445	
Finance and Insurance	29,384	3,706	1,573	113,243	1,572	149,47	32,646	3,665	1,444	105,098	3,418	146,271	33,648	3,606	1,118	113,436	4,138	155,946	
Real Estate and Construction																			
Real Estate ⁽³⁾	11,092	2,813	236	-	-	14,141	10,484	2,747	244	-	-	13,475	11,107	2,748	204	-	-	14,059	
Professional Services	1,668	623	354	-	-	2,645	1,519	774	360	-	-	2,653	1,384	704	372	-	-	2,460	
Education & Health Care	3,242	1,401	8	2	-	4,653	3,326	1,318	7	2	-	4,653	3,153	1,219	8	3	-	4,383	
Other Services	4,420	1,406	356	-	-	6,182	4,497	1,473	348	15	-	6,333	4,481	1,320	350	1	1	6,153	
Government	7,561	1,353	3	15,269	197	24,383	7,617	1,438	3	20,389	232	29,679	5,852	1,288	3	19,979	46	27,168	
Other	4,726	33	287	1,268	-	6,314	3,839	32	482	822	-	5,175	3,355	32	471	410	13	4,281	
Total – Non-retail⁽⁴⁾	91,634	24,754	5,155	129,790	1,769	253,10	92,470	24,207	5,380	126,345	3,650	252,052	90,696	23,125	4,380	133,860	4,198	256,259	

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

(2) Including civil engineering loans, public-private partnership loans, and project finance loans.

(3) Including residential mortgages on dwellings of five or more units.

(4) This total excludes SME retail exposure.

Gross Credit Risk Exposure at Default in Europe⁽¹⁾

(millions of Canadian dollars)

	2020						2019											
	Q1						Q4						Q3					
	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	70	23	580	1	3	677	71	22	690	1	-	784	72	20	252	1	-	345
Italy	-	1	-	-	-	1	-	1	-	-	1	2	-	1	-	-	1	2
Portugal	-	-	-	-	31	31	-	-	-	-	-	-	-	-	-	-	-	-
Spain	4	36	1,965	11	-	2,016	1	38	33	1	39	112	-	38	-	2	38	78
Total GIIPS	74	60	2,545	12	34	2,725	72	61	723	2	40	898	72	59	252	3	39	425
France	87	77	10,539	104	28	10,835	25	76	2,527	-	52	2,680	22	98	1,706	-	51	1,877
Germany	168	32	-	28	318	546	175	34	-	30	27	266	166	10	-	35	-	211
United Kingdom	1,233	44	27,996	3,147	1	32,421	872	15	27,374	2,125	1	30,387	495	3	27,546	1,960	1	30,005
Other Europe	184	20	6,626	512	18	7,360	118	22	2,696	210	9	3,055	218	22	2,939	227	11	3,417
Total – Credit Risk⁽⁴⁾	1,746	233	47,706	3,803	399	53,887	1,262	208	33,320	2,367	129	37,286	973	192	32,443	2,225	102	35,935

Adjustment to exposure for collateral	2020					2019					2019				
	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instrument	Other off-balance sheet items ⁽³⁾	Total
Total – Net Credit Risk⁽⁴⁾	1,746	233	1,695	399	4,073	1,262	208	1,267	129	2,866	973	192	750	102	2,017

	2019												2018					
	Q2						Q1						Q4					
	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	61	37	257	-	-	355	52	22	317	-	1	392	54	19	6,578	6	-	6,657
Italy	-	-	-	-	2	2	-	-	-	-	-	-	-	-	99	-	1	100
Portugal	-	-	-	-	-	-	-	-	-	40	40	-	-	-	-	-	-	-
Spain	-	-	14	-	40	54	1	-	14	-	15	1	-	-	1	42	44	
Total GIIPS	61	37	271	-	42	411	53	22	331	-	41	447	55	19	6,677	7	43	6,801
France	25	52	1,325	1	49	1,452	22	36	1,349	1	29	1,437	14	39	1,579	2	262	1,896
Germany	152	44	19	28	23	266	148	45	-	24	253	470	143	51	-	8	27	229
United Kingdom	513	21	17,154	1,722	1	19,411	786	-	16,612	941	4	18,343	538	-	18,101	3,015	3	21,657
Other Europe	118	3	1,999	176	11	2,307	100	4	1,643	169	9	1,925	87	4	1,837	102	9	2,039
Total – Credit Risk⁽⁴⁾	869	157	20,768	1,927	126	23,847	1,109	107	19,935	1,135	336	22,622	837	113	28,194	3,134	344	32,622

Adjustment to exposure for collateral	2019					2019					2018				
	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total
Total – Net Credit Risk⁽⁴⁾	869	157	671	126	1,823	1,109	107	587	336	2,139	837	113	2,185	344	3,479

(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.

CR4 – Standardised Approach – Credit Risk Exposure and Credit Risk Mitigation (CRM) Effects⁽¹⁾

(millions of Canadian dollars)

The following tables illustrate the effect of CRM on standardised approach capital requirements' calculations. RWA density provides a synthetic metric on riskiness of each portfolio.

		Q1 2020						Q4 2019					
		a	b	c	d	e	f	a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density	Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density
Assets classes		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount			On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount		
1	Sovereigns and their central banks	1,938	52	1,938	–	–	0%	1,654	49	1,654	–	–	0%
2	Non-central government public sector entities	–	–	–	–	–	0%	–	–	–	–	–	0%
3	Multilateral development banks	95	–	95	–	–	0%	95	–	95	–	–	0%
4	Financial institutions	2,456	2,608	2,456	252	960	35%	1,922	2,507	1,922	129	615	30%
5	Securities firms	–	–	–	–	–	0%	–	–	–	–	–	0%
6	Corporates	4,362	727	4,362	202	3,394	74%	3,575	972	3,575	250	2,624	69%
7	Regulatory retail portfolios	4,551	1,337	4,551	242	2,778	58%	4,580	1,550	4,580	309	2,843	58%
8	Secured by residential property	5,443	92	5,443	35	2,090	38%	5,137	82	5,137	32	1,927	37%
9	Secured by commercial real estate	140	–	140	–	140	100%	136	–	136	–	136	100%
10	Equity	–	–	–	–	–	0%	–	–	–	–	–	0%
11	Past-due loans	34	6	34	–	23	68%	34	5	34	–	23	68%
12	Higher-risk categories	4	–	4	–	6	150%	4	–	4	–	6	150%
13	Other assets ⁽²⁾	3,566	–	3,566	–	2,704	76%	3,372	–	3,372	–	2,255	67%
14	Total	22,589	4,822	22,589	731	12,095	52%	20,509	5,165	20,509	720	10,429	49%

		Q3 2019						Q2 2019					
		a	b	c	d	e	f	a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density	Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density
Assets classes		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount			On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount		
1	Sovereigns and their central banks	1,444	49	1,444	–	496	34%	1,293	47	1,293	–	786	61%
2	Non-central government public sector entities	–	–	–	–	–	0%	–	–	–	–	–	0%
3	Multilateral development banks	95	–	95	–	–	0%	20	–	20	–	–	0%
4	Financial institutions	667	2,583	667	237	452	50%	444	2,546	444	202	496	77%
5	Securities firms	–	–	–	–	–	0%	–	–	–	–	–	0%
6	Corporates	3,058	645	3,058	109	1,986	63%	3,022	570	3,022	95	1,933	62%
7	Regulatory retail portfolios	4,821	92	4,821	18	1,987	41%	4,943	86	4,943	17	2,000	40%
8	Secured by residential property	4,782	38	4,782	19	1,802	38%	4,406	39	4,406	19	1,669	38%
9	Secured by commercial real estate	118	–	118	–	118	100%	108	–	108	–	108	100%
10	Equity	–	–	–	–	–	0%	–	–	–	–	–	0%
11	Past-due loans	35	3	35	–	24	69%	32	16	32	–	21	66%
12	Higher-risk categories	4	–	4	–	6	150%	4	–	4	–	7	175%
13	Other assets ⁽²⁾	2,836	–	2,836	–	2,040	72%	2,886	–	2,886	–	2,387	83%
14	Total	17,860	3,410	17,860	383	8,911	49%	17,158	3,304	17,158	333	9,407	54%

(1) Excluding items subject to securitization and counterparty credit risk frameworks.

(2) For completeness purposes, row 13 "Other assets" is populated with all other assets except exposures that are subject to direct capital deductions, those that are treated in the off-balance sheet calculations and exposures below the threshold for deduction.

CR5 – Standardised Approach – Exposures by Asset Classes and Risk Weights⁽¹⁾

(millions of Canadian dollars)

The following tables present the breakdown of credit risk exposures under the standardised approach by asset class and risk weight (corresponding to the riskiness attributed to the exposure according to standardised approach).

		Q1 2020										Q4 2019									
		a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
Asset classes		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
1	Sovereigns and their central banks	1,938	-	-	-	-	-	-	-	-	1,938	1,654	-	-	-	-	-	-	-	-	1,654
2	Non-central government public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Multilateral development banks	95	-	-	-	-	-	-	-	-	95	95	-	-	-	-	-	-	-	-	95
4	Financial institutions	71	-	2,096	-	-	-	541	-	-	2,708	-	-	1,795	-	-	256	-	-	-	2,051
5	Securities firms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Corporates	1,171	-	-	-	-	-	3,393	-	-	4,564	1,202	-	-	-	-	2,623	-	-	-	3,825
7	Regulatory retail portfolios	1,089	-	-	-	-	3,704	-	-	-	4,793	1,099	-	-	-	3,790	-	-	-	-	4,889
8	Secured by residential property	521	-	-	4,089	8	820	40	-	-	5,478	686	-	-	3,607	9	829	38	-	-	5,169
9	Secured by commercial real estate	-	-	-	-	-	-	140	-	-	140	-	-	-	-	-	136	-	-	-	136
10	Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Past-due loans	12	-	-	-	-	-	21	1	-	34	12	-	-	-	-	21	1	-	-	34
12	Higher-risk categories	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	4	-	4
13	Other assets ⁽³⁾	731	-	164	-	-	-	2,671	-	-	3,566	704	-	515	-	-	2,153	-	-	-	3,372
14	Total	5,628	-	2,260	4,089	8	4,524	6,806	5	-	23,320	5,452	-	2,310	3,607	9	4,619	5,227	5	-	21,229

		Q3 2019										Q2 2019									
		a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
Asset classes		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
1	Sovereigns and their central banks	948	-	-	-	-	-	496	-	-	1,444	507	-	-	-	-	786	-	-	-	1,293
2	Non-central government public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Multilateral development banks	95	-	-	-	-	-	-	-	-	95	20	-	-	-	-	-	-	-	-	20
4	Financial institutions	-	-	564	-	-	-	340	-	-	904	-	-	188	-	-	458	-	-	-	646
5	Securities firms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Corporates	1,181	-	-	-	-	-	1,986	-	-	3,167	1,183	-	-	-	-	1,934	-	-	-	3,117
7	Regulatory retail portfolios	2,191	-	-	-	-	2,648	-	-	-	4,839	2,292	-	-	-	2,668	-	-	-	-	4,960
8	Secured by residential property	678	-	-	3,244	9	833	37	-	-	4,801	620	-	-	2,986	11	758	50	-	-	4,425
9	Secured by commercial real estate	-	-	-	-	-	-	118	-	-	118	-	-	-	-	-	108	-	-	-	108
10	Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Past-due loans	11	-	-	-	-	-	23	1	-	35	11	-	-	-	-	20	1	-	-	32
12	Higher-risk categories	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	4	-	4
13	Other assets ⁽³⁾	657	-	174	-	-	-	2,005	-	-	2,836	499	-	-	-	-	2,387	-	-	-	2,886
14	Total	5,761	-	738	3,244	9	3,481	5,005	5	-	18,243	5,132	-	188	2,986	11	3,426	5,743	5	-	17,491

(1) Excluding items subject to securitization and counterparty credit risk frameworks. In the wholesale portfolio, for sovereign and banks asset classes, risk weights are based on external credit ratings issued by independent rating agencies (Moody's, Standard & Poor's, Fitch or DBRS) approved by our supervisor, OSFI.

(2) Post-CCF and Post-CRM.

(3) For completeness purposes, row 13 "Other assets" is populated with all other assets except exposures that are subject to direct capital deductions, those that are treated in the off-balance sheet calculations and exposures below the threshold for deduction.

CR6 – IRB – Credit Risk Exposures by Portfolio and PD Range

(millions of Canadian dollars)

The following tables provide the main parameters used for the calculation of capital requirements for IRB models. The purpose of disclosing these parameters is to enhance the transparency of banks' RWA calculations and the reliability of regulatory measures.

Q1 2020												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
Residential Mortgages and HELOCs – insured	0.00 to < 0.15	939	–	0%	939	0.08%	54,442	5.2%		10	1.1%	–
	0.15 to < 0.25	328	–	0%	328	0.19%	17,632	5.5%		8	2.3%	–
	0.25 to < 0.50	495	–	0%	495	0.36%	20,524	5.8%		19	3.8%	–
	0.50 to < 0.75	298	–	0%	298	0.61%	9,144	6.7%		19	6.3%	–
	0.75 to < 2.50	418	–	0%	418	1.25%	13,084	6.8%		43	10.2%	–
	2.50 to < 10.00	107	–	0%	107	4.64%	3,249	4.0%		14	13.1%	–
	10.00 to < 100.00	59	–	0%	59	29.15%	1,345	3.0%		10	17.4%	1
	100.00 (Default)	41	–	0%	41	100.00%	584	2.8%		5	12.1%	1
Sub-total	2,685	–	0%	2,685	2.71%	120,004	5.6%		128	4.7%	2	4
Residential Mortgages and HELOCs – uninsured	0.00 to < 0.15	23,906	14,433	49%	30,979	0.07%	194,404	19.6%		1,115	3.6%	4
	0.15 to < 0.25	6,964	1,179	65%	7,736	0.19%	33,126	21.7%		706	9.1%	3
	0.25 to < 0.50	7,174	1,094	72%	7,964	0.35%	31,376	22.1%		1,095	13.7%	6
	0.50 to < 0.75	2,440	206	70%	2,585	0.61%	10,193	22.4%		547	21.2%	4
	0.75 to < 2.50	2,156	189	72%	2,294	1.24%	10,663	21.7%		746	32.5%	6
	2.50 to < 10.00	526	24	80%	545	4.63%	3,071	21.6%		384	70.4%	5
	10.00 to < 100.00	178	2	155%	180	26.29%	1,175	23.0%		233	129.1%	11
	100.00 (Default)	87	2	95%	89	100.00%	664	21.9%		126	141.7%	11
Sub-total	43,431	17,129	52%	52,372	0.51%	284,672	20.6%		4,952	9.5%	50	36
Qualifying revolving retail	0.00 to < 0.15	724	5,194	39%	2,773	0.05%	704,318	77.1%		76	2.8%	1
	0.15 to < 0.25	179	389	69%	449	0.20%	213,941	82.6%		42	9.4%	1
	0.25 to < 0.50	262	343	68%	496	0.36%	188,990	80.4%		70	14.2%	1
	0.50 to < 0.75	190	158	74%	306	0.63%	71,928	75.8%		66	21.5%	1
	0.75 to < 2.50	588	221	77%	758	1.44%	244,190	80.6%		328	43.2%	9
	2.50 to < 10.00	397	43	112%	445	4.48%	220,489	84.7%		441	99.2%	17
	10.00 to < 100.00	60	3	67%	62	22.42%	30,512	84.6%		139	225.6%	12
	100.00 (Default)	25	–	5%	24	100.00%	4,322	72.0%		36	147.1%	15
Sub-total	2,425	6,351	45%	5,313	1.41%	1,678,690	79.0%		1,198	22.6%	57	198
Other retail	0.00 to < 0.15	2,016	2,059	45%	2,949	0.06%	119,322	50.6%		276	9.3%	1
	0.15 to < 0.25	895	199	63%	1,021	0.20%	48,810	56.1%		254	24.9%	1
	0.25 to < 0.50	1,399	256	68%	1,574	0.37%	73,714	57.4%		571	36.3%	3
	0.50 to < 0.75	1,119	213	82%	1,293	0.63%	58,525	59.4%		668	51.7%	5
	0.75 to < 2.50	2,922	226	76%	3,094	1.36%	195,679	62.5%		2,294	74.1%	27
	2.50 to < 10.00	868	45	77%	902	4.22%	67,682	67.1%		924	102.4%	25
	10.00 to < 100.00	185	2	70%	186	22.23%	11,831	65.7%		288	154.9%	27
	100.00 (Default)	104	3	56%	105	100.00%	7,399	58.5%		155	147.7%	53
Sub-total	9,508	3,003	54%	11,124	2.20%	582,962	58.1%		5,430	48.8%	142	142

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-credit conversion factor (CCF) for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of retail accounts.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

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

(millions of Canadian dollars)

Q1 2020													
	a	b	c	d	e	f	g	h	i	j	k	l	
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses	
Corporate	0.00 to < 0.15	1,597	3,259	76%	5,193	0.08%	729	45.1%	2.48	1,243	23.9%	2	
	0.15 to < 0.25	11,817	9,295	85%	23,049	0.20%	3,610	37.5%	2.62	7,785	33.8%	17	
	0.25 to < 0.50	10,136	4,748	85%	15,919	0.36%	2,379	34.7%	2.44	6,668	41.9%	20	
	0.50 to < 0.75	8,154	2,692	83%	11,689	0.56%	2,661	32.9%	2.18	5,147	44.0%	21	
	0.75 to < 2.50	14,381	3,651	82%	19,138	1.15%	6,509	33.6%	1.86	11,227	58.7%	74	
	2.50 to < 10.00	2,613	367	80%	3,178	4.62%	1,352	28.0%	1.70	2,401	75.6%	41	
	10.00 to < 100.00	186	23	79%	209	17.34%	64	34.2%	1.01	331	157.9%	13	
	100.00 (Default)	346	18	16%	366	100.00%	193	29.4%	1.04	451	123.2%	118	
	Sub-total	49,230	24,053	83%	78,741	1.20%	17,497	35.4%	2.27	35,253	44.8%	306	333
Sovereign	0.00 to < 0.15	36,718	4,620	97%	42,731	0.01%	579	7.4%	2.40	543	1.3%	-	
	0.15 to < 0.25	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.25 to < 0.50	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.50 to < 0.75	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.75 to < 2.50	9	-	0%	9	1.03%	1	18.5%	3.16	4	44.3%	-	
	2.50 to < 10.00	65	5	81%	71	5.07%	4	14.1%	1.00	32	44.0%	1	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	36,792	4,625	97%	42,811	0.02%	584	7.4%	2.40	579	1.4%	1	2
Financial institutions	0.00 to < 0.15	1,943	197	0%	2,255	0.04%	58	46.7%	1.18	312	13.8%	-	
	0.15 to < 0.25	250	264	95%	514	0.21%	25	28.0%	1.38	117	22.8%	-	
	0.25 to < 0.50	34	78	96%	163	0.36%	8	14.6%	1.23	31	19.3%	-	
	0.50 to < 0.75	-	21	59%	21	0.56%	4	50.5%	1.30	14	66.0%	-	
	0.75 to < 2.50	33	6	100%	53	0.86%	12	54.3%	1.00	46	87.7%	-	
	2.50 to < 10.00	-	-	0%	-	3.19%	2	42.6%	1.00	-	0%	-	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	2,260	566	61%	3,006	0.11%	109	41.9%	1.21	520	17.3%	-	2
Total (all portfolio)	146,331	55,727	69%	196,052	0.84%	2,684,518	27.9%	2.00	48,060	26.1%	558	717	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-credit conversion factor (CCF) for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of individual borrowers.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

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

(millions of Canadian dollars)

Q4 2019												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
Residential Mortgages and HELOCs – insured	0.00 to < 0.15	780	–	0%	780	0.07%	53,452	5.9%		9	1.1%	–
	0.15 to < 0.25	334	–	0%	334	0.20%	17,743	5.4%		8	2.3%	–
	0.25 to < 0.50	502	–	0%	502	0.36%	20,505	6.4%		21	4.2%	–
	0.50 to < 0.75	289	–	0%	289	0.60%	9,271	6.6%		18	6.3%	–
	0.75 to < 2.50	422	–	0%	422	1.32%	14,027	7.9%		54	12.7%	–
	2.50 to < 10.00	148	–	0%	148	4.33%	4,150	6.6%		29	19.9%	–
	10.00 to < 100.00	60	–	0%	60	28.27%	1,414	3.0%		11	17.6%	–
	100.00 (Default)	35	–	0%	35	100.00%	602	3.0%		5	15.0%	2
	Sub-total	2,570	–	0%	2,570	2.70%	121,164	6.3%		155	6.0%	2
Residential Mortgages and HELOCs – uninsured	0.00 to < 0.15	24,487	14,376	50%	31,626	0.07%	196,837	19.6%		1,137	3.6%	4
	0.15 to < 0.25	6,467	986	68%	7,139	0.19%	31,425	22.0%		659	9.2%	3
	0.25 to < 0.50	5,939	911	70%	6,572	0.34%	26,307	22.6%		921	14.0%	5
	0.50 to < 0.75	2,448	198	72%	2,591	0.61%	10,183	22.5%		555	21.4%	4
	0.75 to < 2.50	2,305	222	69%	2,458	1.29%	10,969	22.3%		841	34.2%	7
	2.50 to < 10.00	668	50	68%	702	4.52%	3,830	21.5%		488	69.4%	7
	10.00 to < 100.00	189	4	122%	193	23.85%	1,213	22.9%		251	130.2%	10
	100.00 (Default)	91	3	86%	93	100.00%	707	21.6%		132	141.8%	12
	Sub-total	42,594	16,750	52%	51,374	0.54%	281,471	20.6%		4,984	9.7%	52
Qualifying revolving retail	0.00 to < 0.15	723	5,324	40%	2,873	0.05%	704,204	77.6%		81	2.8%	1
	0.15 to < 0.25	187	379	75%	471	0.19%	204,518	83.4%		44	9.4%	1
	0.25 to < 0.50	305	327	73%	544	0.36%	181,889	80.4%		77	14.2%	2
	0.50 to < 0.75	217	155	77%	336	0.63%	75,335	76.5%		73	21.7%	2
	0.75 to < 2.50	601	250	79%	798	1.43%	258,658	81.8%		347	43.5%	10
	2.50 to < 10.00	413	51	105%	467	4.52%	223,005	85.4%		469	100.4%	17
	10.00 to < 100.00	70	4	63%	73	22.42%	30,381	83.6%		164	223.6%	14
	100.00 (Default)	24	–	5%	24	100.00%	4,197	72.6%		50	208.5%	14
	Sub-total	2,540	6,490	47%	5,586	1.42%	1,682,187	79.6%		1,305	23.4%	61
Other retail	0.00 to < 0.15	2,051	2,043	45%	2,977	0.06%	118,678	50.9%		276	9.3%	1
	0.15 to < 0.25	824	214	67%	967	0.20%	46,048	54.3%		229	23.7%	1
	0.25 to < 0.50	1,403	250	71%	1,579	0.36%	77,925	56.9%		562	35.6%	3
	0.50 to < 0.75	1,058	199	81%	1,219	0.63%	54,037	59.0%		624	51.2%	5
	0.75 to < 2.50	2,978	219	75%	3,143	1.38%	195,759	62.2%		2,340	74.5%	28
	2.50 to < 10.00	966	59	76%	1,011	4.33%	70,111	65.6%		1,017	100.6%	29
	10.00 to < 100.00	273	4	72%	276	18.59%	15,379	64.9%		396	143.6%	33
	100.00 (Default)	103	3	70%	105	100.00%	6,923	57.8%		188	178.6%	49
	Sub-total	9,656	2,991	54%	11,277	2.31%	584,860	57.8%		5,632	49.9%	149

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-credit conversion factor (CCF) for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of retail accounts.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

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

(millions of Canadian dollars)

Q4 2019													
	a	b	c	d	e	f	g	h	i	j	k	l	
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses	
Corporate	0.00 to < 0.15	1,592	3,561	76%	5,440	0.09%	741	46.2%	2.45	1,394	25.7%	2	
	0.15 to < 0.25	11,712	8,346	84%	21,924	0.20%	3,654	37.5%	2.61	7,408	33.8%	16	
	0.25 to < 0.50	9,906	4,930	90%	15,929	0.36%	2,388	35.1%	2.46	6,661	41.8%	20	
	0.50 to < 0.75	7,624	2,477	81%	11,092	0.56%	2,641	33.0%	2.21	4,953	44.6%	20	
	0.75 to < 2.50	14,225	3,081	83%	18,503	1.15%	6,180	33.4%	1.94	10,793	58.3%	72	
	2.50 to < 10.00	2,343	355	79%	2,929	4.65%	1,295	28.4%	1.66	2,244	76.6%	39	
	10.00 to < 100.00	215	27	70%	242	16.98%	61	32.6%	1.07	349	144.4%	14	
	100.00 (Default)	382	213	2%	599	100.00%	200	27.5%	1.23	580	96.9%	112	
	Sub-total	47,999	22,990	83%	76,658	1.51%	17,160	35.5%	2.29	34,382	44.8%	295	322
Sovereign	0.00 to < 0.15	28,939	4,470	97%	34,857	0.01%	575	8.9%	2.44	563	1.6%	-	
	0.15 to < 0.25	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.25 to < 0.50	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.50 to < 0.75	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.75 to < 2.50	-	-	0%	-	0%	-	0%	-	-	0%	-	
	2.50 to < 10.00	63	9	89%	72	5.07%	4	14.1%	1.00	31	44.0%	1	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	29,002	4,479	97%	34,929	0.02%	579	8.9%	2.43	594	1.7%	1	2
Financial institutions	0.00 to < 0.15	2,901	388	0%	3,400	0.06%	67	48.1%	1.42	640	18.9%	1	
	0.15 to < 0.25	226	263	95%	489	0.21%	22	26.2%	1.53	104	21.2%	-	
	0.25 to < 0.50	20	83	90%	154	0.36%	10	12.4%	1.53	23	15.4%	-	
	0.50 to < 0.75	3	25	50%	28	0.56%	5	50.1%	1.44	19	67.4%	-	
	0.75 to < 2.50	109	6	100%	127	0.86%	14	45.6%	1.00	93	73.5%	1	
	2.50 to < 10.00	1	-	0%	1	3.15%	3	47.9%	1.00	1	153.1%	-	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	3,260	765	45%	4,199	0.11%	121	44.2%	1.43	880	21.0%	2	2
Total (all portfolio)	137,621	54,465	68%	186,593	0.99%	2,687,542	29.3%	2.30	47,932	24.1%	562	699	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-credit conversion factor (CCF) for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of individual borrowers.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

CR8 – RWA Flow Statements of Credit Risk Exposures Under IRB

(millions of Canadian dollars)

The following table presents a flow statement explaining variations in the credit risk-weighted assets (RWA) determined under an IRB approach.

		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
		a				
1	RWA at beginning	49,546	49,045	47,395	47,097	46,640
2	Book size ⁽¹⁾	391	544	1,511	93	721
3	Book quality ⁽²⁾	(41)	(2)	(127)	49	(254)
4	Model updates ⁽³⁾	(17)	(32)	397	30	-
5	Methodology and policy ⁽⁴⁾	-	-	-	-	-
6	Acquisitions and disposals ⁽⁵⁾	-	-	-	-	-
7	Foreign exchange movements ⁽⁶⁾	36	(9)	(131)	126	(10)
8	Other ⁽⁷⁾	-	-	-	-	-
9	RWA at end	49,915	49,546	49,045	47,395	47,097

(1) Organic changes in book size and composition (including origination of new businesses and maturing loans) excluding acquisitions and disposal of entities.

(2) Changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration, parameter recalibration, or similar effects.

(3) Changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses.

(4) Changes due to methodological changes in calculations driven by regulatory policy changes, including both revisions to existing regulations and new regulations.

(5) Changes in book size due to acquisitions and/or divestitures.

(6) Changes driven by market movements such as foreign exchange movements.

(7) This category captures changes that cannot be attributed to any other category.

AIRB Credit Risk Exposure - Back-Testing⁽¹⁾

(millions of Canadian dollars)

	2020						2019						
	Q1						Q4						
	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	
Retail Portfolio⁽⁵⁾													
Insured residential mortgages ⁽⁶⁾	0.74%	0.54%	2.64%	n.a.	n.a.	n.a.	0.78%	0.57%	2.64%	n.a.	n.a.	n.a.	n.a.
Uninsured residential mortgages incl. HELOCs ⁽⁷⁾	0.33%	0.31%	20.77%	9.01%	96.69%	91.15%	0.33%	0.34%	20.79%	7.00%	95.92%	90.44%	90.44%
Qualifying revolving retail ⁽⁸⁾	1.35%	1.21%	85.09%	79.24%	106.14%	102.91%	1.37%	1.21%	85.19%	79.63%	105.72%	102.80%	102.80%
Other retail	1.54%	0.98%	66.70%	57.99%	94.91%	86.75%	1.62%	1.00%	66.54%	60.65%	95.31%	90.00%	90.00%
Non-Retail Portfolio⁽⁹⁾													
Corporate	1.06%	0.44%	40.93%	33.09%	80.14%	85.53%	1.03%	0.37%	37.64%	29.80%	82.09%	85.20%	85.20%
Sovereign ⁽¹⁰⁾	0.06%	0.00%	11.54%	n.a.	88.30%	n.a.	0.05%	0.00%	11.54%	n.a.	88.30%	n.a.	n.a.
Financial Institutions ⁽¹⁰⁾	0.36%	0.00%	40.75%	n.a.	100.00%	n.a.	0.37%	0.00%	40.75%	n.a.	100.00%	n.a.	n.a.

	2019												
	Q3						Q2						
	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	
Retail Portfolio⁽⁵⁾													
Insured residential mortgages ⁽⁶⁾	0.77%	0.64%	2.64%	n.a.	n.a.	n.a.	0.80%	0.66%	2.64%	n.a.	n.a.	n.a.	n.a.
Uninsured residential mortgages incl. HELOCs ⁽⁷⁾	0.33%	0.33%	21.11%	7.92%	94.97%	92.74%	0.34%	0.31%	21.51%	8.16%	95.95%	78.17%	78.17%
Qualifying revolving retail ⁽⁸⁾	1.36%	1.23%	85.54%	79.16%	105.23%	102.40%	1.34%	1.20%	79.88%	73.65%	100.40%	102.32%	102.32%
Other retail	1.60%	1.08%	66.58%	60.99%	95.66%	87.34%	1.63%	1.07%	66.80%	59.42%	94.94%	88.39%	88.39%
Non-Retail Portfolio⁽⁹⁾													
Corporate	1.02%	0.33%	36.58%	31.11%	81.15%	83.54%	1.01%	0.37%	34.65%	30.41%	84.18%	85.45%	85.45%
Sovereign ⁽¹⁰⁾	0.05%	0.00%	11.54%	n.a.	88.30%	n.a.	0.07%	0.00%	11.54%	n.a.	88.30%	n.a.	n.a.
Financial Institutions ⁽¹⁰⁾	0.36%	0.00%	40.75%	n.a.	100.00%	n.a.	0.35%	0.00%	40.75%	n.a.	100.00%	n.a.	n.a.

(1) Estimated PD and actual default rates are consistent with what is presented in table CR9 (presented annually). Actual and estimated LGD and EAD parameters are reported on a one-month lag. For example, for Q1 2020, estimated percentages are as of December 31, 2018 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 LGD for insured residential mortgages is not applicable to reflect the credit risk mitigation from government backed entities.

(7) Actual and estimated EAD for residential mortgage is computed only for HELOCs since the conventional residential mortgages are non-revolving.

(8) Variations of LGD and EAD for Qualifying revolving retail are explained by a revision of the credit cards LGD and EAD models in Q3 2019.

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

(10) Actual LGD for the Financial Institutions and Sovereign are not applicable because no defaulted facilities recovery were completed during the period. Actual EAD are not applicable because no default was observed during the period.

CR10 – IRB – Specialised Lending and Equities Under the Simple Risk Weight Method

(millions of Canadian dollars)

	Q1 2020					Q4 2019				
	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA
Equities under the materiality exemption	948	103	100%	1,000	1,060	1,010	95	100%	1,057	1,121

	Q3 2019					Q2 2019				
	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA
Equities under the materiality exemption	964	98	100%	1,014	1,074	839	102	100%	890	943

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

(millions of Canadian dollars)

The following tables provide a comprehensive view of the methods used to calculate counterparty credit risk regulatory requirements and the main parameters used within each method.

		Q1 2020						Q4 2019					
		a	b	c	d	e	f	a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA	Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1	SA-CCR (for derivatives)	2,414	7,854		1.4	14,375	4,035	2,033	6,845		1.4	12,429	3,568
2	Internal Model Method (for derivatives and SFTs)			-	-	-	-			-	-	-	-
3	Simple Approach for credit risk mitigation (for SFTs)					-	-					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					-	-					-	-
5	VaR for SFTs					8,525	1,132					6,933	1,071
6	Total						5,167						4,639

		Q3 2019						Q2 2019					
		a	b	c	d	e	f	a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA	Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1	SA-CCR (for derivatives)	2,203	6,696		1.4	12,459	4,060	2,122	6,460		1.4	12,015	4,087
2	Internal Model Method (for derivatives and SFTs)			-	-	-	-			-	-	-	-
3	Simple Approach for credit risk mitigation (for SFTs)					-	-					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					-	-					-	-
5	VaR for SFTs					7,501	1,079					7,142	966
6	Total						5,139						5,053

(1) Excludes exposure and RWA for qualified central counterparties (QCCPs) and credit valuation adjustment (CVA).

(2) EEPE: Effective Expected Positive Exposure.

CCR2 – Credit Valuation Adjustment (CVA) Capital Charge

(millions of Canadian dollars)

The following table provides the CVA regulatory calculations (with a breakdown by standardised and advanced approaches).

		Q1 2020		Q4 2019		Q3 2019		Q2 2019		Q1 2019	
		a	b	a	b	a	b	a	b	a	b
		EAD post-CRM	RWA								
	Total portfolios subject to the Advanced CVA capital charge										
1	(i) VaR component (including the 3 x multiplier)		-		-		-		-		-
2	(ii) Stressed VaR component (including the 3 x multiplier)		-		-		-		-		-
3	All portfolios subject to the Standardised CVA capital charge	9,981	1,364	8,628	1,200	8,652	1,139	8,340	1,151	6,845	1,020
4	Total subject to the CVA capital charge	9,981	1,364	8,628	1,200	8,652	1,139	8,340	1,151	6,845	1,020

CCR3 – Standardised Approach – CCR Exposures by Regulatory Portfolio and Risk Weights

(millions of Canadian dollars)

The following tables provide a breakdown of counterparty credit risk exposures calculated according to the standardised approach: by portfolio (type of counterparties) and by risk weights (riskiness attributed according to standardised approach).

Regulatory portfolio	Risk weight	Q1 2020									Q4 2019								
		a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i
		0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure
Sovereigns		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)		9	-	-	-	-	-	-	-	9	7	-	-	-	-	-	-	-	7
Financial institutions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securities firms		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporates		-	-	-	-	-	513	-	-	513	-	-	-	-	-	454	-	-	454
Regulatory retail portfolios		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other assets ⁽¹⁾		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		9	-	-	-	-	513	-	-	522	7	-	-	-	-	454	-	-	461

Regulatory portfolio	Risk weight	Q3 2019									Q2 2019								
		a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i
		0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure
Sovereigns		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)		11	-	-	-	-	-	-	-	11	18	-	-	-	-	-	-	-	18
Financial institutions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securities firms		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporates		-	-	-	-	-	648	-	-	648	-	-	-	-	-	436	-	-	436
Regulatory retail portfolios		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other assets ⁽¹⁾		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		11	-	-	-	-	648	-	-	659	18	-	-	-	-	436	-	-	454

(1) Excluding the exposures to CCPs, which are reported in CCR8.

CCR4 – IRB – CCR Exposures by Portfolio and PD Scale

(millions of Canadian dollars)

The following tables provide all relevant parameters used for the calculation of counterparty credit risk capital requirements for IRB models.

		Q1 2020						
PD scale ⁽¹⁾		a	b	c	d	e	f	g
		EAD post-CRM	average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA	RWA density ⁽⁶⁾
Corporate	0.00 to < 0.15	1,584	0.07%	487	50.1%	0.71	332	21.0%
	0.15 to < 0.25	3,569	0.17%	551	49.2%	2.81	874	24.5%
	0.25 to < 0.50	707	0.36%	235	37.9%	1.94	330	46.7%
	0.50 to < 0.75	938	0.56%	214	40.5%	3.28	365	38.9%
	0.75 to < 2.50	839	0.91%	584	47.2%	1.83	637	75.9%
	2.50 to < 10.00	110	3.67%	51	36.1%	1.08	108	98.2%
	10.00 to < 100.00	–	13.82%	1	46.5%	1.00	–	0.0%
	100.00 (Default)	9	100.00%	3	37.2%	1.38	13	144.4%
Sub-total	7,756	0.46%	2,126	46.9%	2.23	2,659	34.3%	
Sovereign	0.00 to < 0.15	7,197	0.03%	168	11.8%	1.23	138	1.9%
	0.15 to < 0.25	41	0.21%	1	11.6%	0.01	2	5%
	0.25 to < 0.50	–	0.36%	1	12%	1.00	–	0%
	0.50 to < 0.75	–	0%	–	0%	–	–	0%
	0.75 to < 2.50	4	1.03%	1	12.8%	1.00	1	25.0%
	2.50 to < 10.00	–	0%	–	0%	–	–	0%
	10.00 to < 100.00	–	0%	–	0%	–	–	0%
	100.00 (Default)	–	0%	–	0%	–	–	0%
Sub-total	7,242	0.04%	171	11.8%	1.23	141	1.9%	
Financial institutions	0.00 to < 0.15	5,974	0.06%	57	49.6%	0.57	888	14.9%
	0.15 to < 0.25	2,616	0.16%	34	47.7%	0.47	819	31.3%
	0.25 to < 0.50	132	0.36%	15	50.3%	0.09	67	50.8%
	0.50 to < 0.75	30	0.56%	15	48.7%	0.87	19	63.3%
	0.75 to < 2.50	64	1.11%	20	45.6%	1.19	60	93.8%
	2.50 to < 10.00	1	3.09%	2	50.4%	0.03	1	100%
	10.00 to < 100.00	–	0%	–	0%	–	–	0%
	100.00 (Default)	–	0%	–	0%	–	–	0%
Sub-total	8,817	0.10%	143	49.0%	0.54	1,854	21.0%	
Total (sum of portfolios)	23,815	0.20%	2,440	37.0%	1.23	4,654	19.5%	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the obligor grade PD weighted by EAD.

(3) Represents the number of individual borrowers.

(4) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(5) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(6) Total risk-weighted assets to EAD post-CRM.

CCR4 – IRB – CCR Exposures by Portfolio and PD Scale (continued)

(millions of Canadian dollars)

		Q4 2019						
PD scale ⁽¹⁾	a	b	c	d	e	f	g	
	EAD post-CRM	average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA	RWA density ⁽⁶⁾	
Corporate	0.00 to < 0.15	2,541	0.06%	496	53.1%	2.55	265	10.4%
	0.15 to < 0.25	2,113	0.19%	507	48.0%	1.92	845	40.0%
	0.25 to < 0.50	673	0.36%	258	43.4%	2.13	372	55.3%
	0.50 to < 0.75	866	0.56%	201	43.7%	2.99	334	38.6%
	0.75 to < 2.50	816	0.91%	606	47.8%	1.63	692	84.8%
	2.50 to < 10.00	56	4.52%	53	35.8%	1.26	58	103.6%
	10.00 to < 100.00	9	13.84%	6	37.6%	1.61	13	144.4%
	100.00 (Default)	5	100.00%	2	21.6%	4.98	2	40.0%
	Sub-total	7,079	0.41%	2,129	48.7%	2.26	2,581	36.5%
Sovereign	0.00 to < 0.15	5,988	0.03%	171	11.7%	1.52	128	2.1%
	0.15 to < 0.25	2	0.21%	1	11.6%	–	–	0%
	0.25 to < 0.50	–	0%	–	0%	–	–	0%
	0.50 to < 0.75	–	0%	–	0%	–	–	0%
	0.75 to < 2.50	7	1.03%	1	12.8%	1.00	2	28.6%
	2.50 to < 10.00	–	0%	–	0%	–	–	0%
	10.00 to < 100.00	–	0%	–	0%	–	–	0%
	100.00 (Default)	–	0%	–	0%	–	–	0%
	Sub-total	5,997	0.04%	173	11.7%	1.51	130	2.2%
Financial institutions	0.00 to < 0.15	5,699	0.06%	57	46.8%	0.74	896	15.7%
	0.15 to < 0.25	1,274	0.16%	33	50.7%	0.25	396	31.1%
	0.25 to < 0.50	45	0.36%	16	48.8%	0.17	20	44.4%
	0.50 to < 0.75	143	0.56%	18	49.0%	0.50	102	71.3%
	0.75 to < 2.50	71	1.15%	23	46.6%	0.77	60	84.5%
	2.50 to < 10.00	–	3.09%	2	38.4%	0.41	–	0%
	10.00 to < 100.00	–	0%	–	0%	–	–	0%
	100.00 (Default)	–	0%	–	0%	–	–	0%
	Sub-total	7,232	0.10%	149	47.6%	0.65	1,474	20.4%
Total (sum of portfolios)	20,308	0.19%	2,451	37.0%	1.31	4,185	20.6%	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the obligor grade PD weighted by EAD.

(3) Represents the number of individual borrowers.

(4) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(5) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(6) Total risk-weighted assets to EAD post-CRM.

CCR5 – Composition of Collateral for CCR Exposure

(millions of Canadian dollars)

The following tables provide a breakdown of all types of collateral posted or received by banks to support or reduce the counterparty credit risk exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP.

	Q1 2020						Q4 2019					
	a	b	c	d	e	f	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs		Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
Segregated	Unsegregated	Segregated	Unsegregated	Segregated			Unsegregated	Segregated	Unsegregated			
Cash	-	6,714	-	857	26,402	16,037	-	5,506	-	1,315	25,066	20,889
Securities issued or guaranteed by												
Canadian government	-	49	-	985	14,777	14,699	28	36	-	952	16,794	13,141
Canadian provincial and municipal governments	-	12	-	18	14,215	16,978	-	78	-	10	11,702	13,953
U.S. Treasury, other U.S. agencies and other foreign governments	59	55	-	3	42,540	39,162	64	54	-	-	33,609	29,870
Other debt securities	-	33	-	-	2,228	749	-	29	-	-	1,875	691
Equity securities	-	-	-	-	59,905	76,203	-	-	-	-	53,522	67,085
Total	59	6,863	-	1,863	160,067	163,828	92	5,703	-	2,277	142,568	145,629

	Q3 2019						Q2 2019					
	a	b	c	d	e	f	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs		Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
Segregated	Unsegregated	Segregated	Unsegregated	Segregated			Unsegregated	Segregated	Unsegregated			
Cash	-	5,732	-	545	19,764	13,928	-	5,020	-	660	20,376	17,190
Securities issued or guaranteed by												
Canadian government	-	35	-	1,106	10,593	11,486	7	58	-	956	12,440	9,910
Canadian provincial and municipal governments	-	75	-	66	11,464	14,587	-	32	-	51	11,068	13,871
U.S. Treasury, other U.S. agencies and other foreign governments	63	71	-	-	34,661	30,461	64	63	-	7	20,169	15,843
Other debt securities	-	15	-	-	1,691	446	-	15	-	-	2,101	1,851
Equity securities	-	-	-	-	59,136	69,240	-	-	-	-	50,418	59,758
Total	63	5,928	-	1,717	137,309	140,148	71	5,188	-	1,674	116,572	118,423

CCR6 – Credit Derivatives Exposures

(millions of Canadian dollars)

The following tables illustrate the extent of a bank's exposures to credit derivative transactions broken down between derivatives purchased or sold.

	Q1 2020		Q4 2019		Q3 2019		Q2 2019		Q1 2019	
	a	b	a	b	a	b	a	b	a	b
	Protection purchased	Protection sold								
Notionals										
Credit default swaps										
Indices, singles names and other	4,923	2,211	3,959	1,878	3,481	1,255	3,005	936	1,943	252
Tranches on indices	-	-	-	-	-	-	-	-	-	-
Total return swaps	-	-	142	-	150	-	162	-	161	-
Credit options	-	-	-	-	-	-	-	-	-	-
Other credit derivatives	-	-	-	-	-	-	-	-	-	-
Total notionals	4,923	2,211	4,101	1,878	3,631	1,255	3,167	936	2,104	252
Fair values										
Positive fair value (asset)	-	52	-	45	-	34	1	27	5	7
Negative fair value (liability)	(120)	-	(101)	-	(93)	-	(78)	-	(42)	-

CCR8 – Exposures to Central Counterparties (CCP)⁽¹⁾

(millions of Canadian dollars)

The following table provides a comprehensive picture of the bank's exposures to central counterparties. In particular, the template includes all types of exposures and related capital requirements.

	Q1 2020		Q4 2019		Q3 2019		Q2 2019		Q1 2019	
	a	b	a	b	a	b	a	b	a	b
	EAD (post-CRM)	RWA								
1 Exposures to QCCPs (total)		174		161		193		181		276
2 Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	1,794	35	1,797	36	1,401	29	1,182	24	1,088	21
3 (i) OTC derivatives	74	1	63	1	25	1	36	1	51	1
4 (ii) Exchange-traded derivatives	1,602	32	1,680	34	1,292	26	1,077	22	917	18
5 (iii) Securities financing transactions	118	2	54	1	84	2	69	1	120	2
6 (iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-	-	-	-	-
7 Segregated initial margin	1,802		733		764		2,117		2,123	
8 Non-segregated initial margin	51	-	46	-	44	-	45	-	127	-
9 Pre-funded default fund contributions	159	139	168	125	235	164	389	157	482	255
10 Unfunded default fund contributions	-	-	-	-	-	-	-	-	-	-

(1) The Bank has no exposure to non-qualifying central counterparties.

SEC1 – Securitization Exposures in the Banking Book

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its banking book.

		Q1 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	653	-	653	2,587	-	2,587	749	-	749
	Of which :									
2	Residential mortgages	-	-	-	2,057	-	2,057	237	-	237
3	Credit card	653	-	653	-	-	-	12	-	12
4	Other retail exposures	-	-	-	530	-	530	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	271	-	271	777	-	777
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	7	-	7
9	Lease and receivables	-	-	-	257	-	257	770	-	770
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q4 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	668	-	668	2,319	-	2,319	759	-	759
	Of which :									
2	Residential mortgages	-	-	-	1,792	-	1,792	247	-	247
3	Credit card	668	-	668	-	-	-	12	-	12
4	Other retail exposures	-	-	-	527	-	527	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	289	-	289	729	-	729
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	9	-	9
9	Lease and receivables	-	-	-	275	-	275	720	-	720
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC1 – Securitization Exposures in the Banking Book (continued)

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its banking book.

		Q3 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	671	-	671	2,452	-	2,452	1,082	-	1,082
	Of which :									
2	Residential mortgages	-	-	-	1,940	-	1,940	270	-	270
3	Credit card	671	-	671	-	-	-	12	-	12
4	Other retail exposures	-	-	-	512	-	512	800	-	800
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	282	-	282	729	-	729
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	9	-	9
9	Lease and receivables	-	-	-	270	-	270	720	-	720
10	Other wholesale	-	-	-	12	-	12	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q2 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	675	-	675	2,162	-	2,162	1,148	-	1,148
	Of which :									
2	Residential mortgages	-	-	-	1,850	-	1,850	336	-	336
3	Credit card	675	-	675	-	-	-	12	-	12
4	Other retail exposures	-	-	-	312	-	312	800	-	800
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	282	-	282	730	-	730
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	10	-	10
9	Lease and receivables	-	-	-	270	-	270	720	-	720
10	Other wholesale	-	-	-	12	-	12	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC2 – Securitization Exposures in the Trading Book

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its trading book.

		Q1 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1	–	1	4	–	4	18	–	18
	Of which :									
2	Residential mortgages	–	–	–	3	–	3	9	–	9
3	Credit card	1	–	1	–	–	–	9	–	9
4	Other retail exposures	–	–	–	1	–	1	–	–	–
5	Re-securitization	–	–	–	–	–	–	–	–	–
6	Non-Retail	–	–	–	–	–	–	13	–	13
	Of which :									
7	Loans to corporates	–	–	–	–	–	–	–	–	–
8	Commercial mortgage	–	–	–	–	–	–	12	–	12
9	Lease and receivables	–	–	–	–	–	–	1	–	1
10	Other wholesale	–	–	–	–	–	–	–	–	–
11	Re-securitization	–	–	–	–	–	–	–	–	–

		Q4 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	5	–	5	12	–	12	13	–	13
	Of which :									
2	Residential mortgages	–	–	–	9	–	9	7	–	7
3	Credit card	5	–	5	–	–	–	6	–	6
4	Other retail exposures	–	–	–	3	–	3	–	–	–
5	Re-securitization	–	–	–	–	–	–	–	–	–
6	Non-Retail	–	–	–	1	–	1	15	–	15
	Of which :									
7	Loans to corporates	–	–	–	–	–	–	–	–	–
8	Commercial mortgage	–	–	–	–	–	–	12	–	12
9	Lease and receivables	–	–	–	1	–	1	3	–	3
10	Other wholesale	–	–	–	–	–	–	–	–	–
11	Re-securitization	–	–	–	–	–	–	–	–	–

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC2 – Securitization Exposures in the Trading Book (continued)

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its trading book.

		Q3 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1	–	1	2	–	2	19	–	19
	Of which :									
2	Residential mortgages	–	–	–	2	–	2	13	–	13
3	Credit card	1	–	1	–	–	–	6	–	6
4	Other retail exposures	–	–	–	–	–	–	–	–	–
5	Re-securitization	–	–	–	–	–	–	–	–	–
6	Non-Retail	–	–	–	–	–	–	21	–	21
	Of which :									
7	Loans to corporates	–	–	–	–	–	–	–	–	–
8	Commercial mortgage	–	–	–	–	–	–	12	–	12
9	Lease and receivables	–	–	–	–	–	–	9	–	9
10	Other wholesale	–	–	–	–	–	–	–	–	–
11	Re-securitization	–	–	–	–	–	–	–	–	–

		Q2 2019								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	–	–	–	–	–	–	36	–	36
	Of which :									
2	Residential mortgages	–	–	–	–	–	–	28	–	28
3	Credit card	–	–	–	–	–	–	8	–	8
4	Other retail exposures	–	–	–	–	–	–	–	–	–
5	Re-securitization	–	–	–	–	–	–	–	–	–
6	Non-Retail	–	–	–	–	–	–	17	–	17
	Of which :									
7	Loans to corporates	–	–	–	–	–	–	–	–	–
8	Commercial mortgage	–	–	–	–	–	–	12	–	12
9	Lease and receivables	–	–	–	–	–	–	5	–	5
10	Other wholesale	–	–	–	–	–	–	–	–	–
11	Re-securitization	–	–	–	–	–	–	–	–	–

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC 3 – Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements⁽¹⁾ – Bank Acting as Originator or as Sponsor

(millions of Canadian dollars)

The following tables present securitization in the banking book when the bank acts as originator or sponsor and the associated capital requirements.

		Q1 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
2	Traditional securitization	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
3	Of which securitization	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
4	Of which retail underlying	3,186	–	28	26	–	250	2,990	–	–	37	356	–	–	3	28	–	–
5	Of which wholesale	271	–	–	–	–	–	271	–	–	–	27	–	–	2	–	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

		Q4 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,223	–	28	25	–	–	3,276	–	–	–	385	–	–	–	31	–	–
2	Traditional securitization	3,223	–	28	25	–	–	3,276	–	–	–	385	–	–	–	31	–	–
3	Of which securitization	3,223	–	28	25	–	–	3,276	–	–	–	385	–	–	–	31	–	–
4	Of which retail underlying	2,934	–	28	25	–	–	2,987	–	–	–	356	–	–	–	29	–	–
5	Of which wholesale	289	–	–	–	–	–	289	–	–	–	29	–	–	2	–	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 3 – Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements⁽¹⁾ – Bank Acting as Originator or as Sponsor (continued)

(millions of Canadian dollars)

The following tables present securitization in the banking book when the bank acts as originator or sponsor and the associated capital requirements.

		Q3 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,351	-	28	26	-	-	3,405	-	-	-	398	-	-	-	32	-	-
2	Traditional securitization	3,351	-	28	26	-	-	3,405	-	-	-	398	-	-	-	32	-	-
3	Of which securitization	3,351	-	28	26	-	-	3,405	-	-	-	398	-	-	-	32	-	-
4	Of which retail underlying	3,069	-	28	26	-	-	3,123	-	-	-	370	-	-	-	30	-	-
5	Of which wholesale	282	-	-	-	-	-	282	-	-	-	28	-	-	-	2	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Q2 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,065	-	28	26	-	-	3,119	-	-	-	369	-	-	-	30	-	-
2	Traditional securitization	3,065	-	28	26	-	-	3,119	-	-	-	369	-	-	-	30	-	-
3	Of which securitization	3,065	-	28	26	-	-	3,119	-	-	-	369	-	-	-	30	-	-
4	Of which retail underlying	2,783	-	28	26	-	-	2,837	-	-	-	341	-	-	-	28	-	-
5	Of which wholesale	282	-	-	-	-	-	282	-	-	-	28	-	-	-	2	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 4 – Securitization Exposures in the Banking Book and Associated Capital Requirements⁽¹⁾ – Bank Acting as Investor

(millions of Canadian dollars)

The following tables present securitization exposures in the banking book where the bank acts as investor and the associated capital requirements.

Q1 2020																	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
	≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1 Total exposures	1,469	–	57	–	–	237	789	500	–	36	110	80	–	3	9	6	–
2 Traditional securitization	1,469	–	57	–	–	237	789	500	–	36	110	80	–	3	9	6	–
3 Of which securitization	1,469	–	57	–	–	237	789	500	–	36	110	80	–	3	9	6	–
4 Of which retail underlying	749	–	–	–	–	237	12	500	–	36	2	80	–	3	–	6	–
5 Of which wholesale	720	–	57	–	–	–	777	–	–	–	108	–	–	–	9	–	–
6 Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7 Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8 Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Q4 2019																	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
	≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1 Total exposures	1,479	–	9	–	–	231	757	500	–	37	78	76	–	3	6	6	–
2 Traditional securitization	1,479	–	9	–	–	231	757	500	–	37	78	76	–	3	6	6	–
3 Of which securitization	1,479	–	9	–	–	231	757	500	–	37	78	76	–	3	6	6	–
4 Of which retail underlying	759	–	–	–	–	231	28	500	–	37	2	76	–	3	–	6	–
5 Of which wholesale	720	–	9	–	–	–	729	–	–	–	76	–	–	–	6	–	–
6 Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7 Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8 Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 4 – Securitization Exposures in the Banking Book and Associated Capital Requirements⁽¹⁾

– Bank Acting as Investor (continued)

(millions of Canadian dollars)

The following tables present securitization exposures in the banking book where the bank acts as investor and the associated capital requirements.

		Q3 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,802	–	9	–	–	254	757	800	–	40	79	126	–	3	6	10	–
2	Traditional securitization	1,802	–	9	–	–	254	757	800	–	40	79	126	–	3	6	10	–
3	Of which securitization	1,802	–	9	–	–	254	757	800	–	40	79	126	–	3	6	10	–
4	Of which retail underlying	1,082	–	–	–	–	254	28	800	–	40	2	126	–	3	–	10	–
5	Of which wholesale	720	–	9	–	–	–	729	–	–	–	77	–	–	6	–	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

		Q2 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,868	–	10	–	–	320	758	800	–	50	80	128	–	4	6	10	–
2	Traditional securitization	1,868	–	10	–	–	320	758	800	–	50	80	128	–	4	6	10	–
3	Of which securitization	1,868	–	10	–	–	320	758	800	–	50	80	128	–	4	6	10	–
4	Of which retail underlying	1,148	–	–	–	–	320	28	800	–	50	2	128	–	4	–	10	–
5	Of which wholesale	720	–	10	–	–	–	730	–	–	–	78	–	–	6	–	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

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 honor 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 mainly includes the qualifying portion of the subordinated debentures and the collective allowance on non-impaired loans eligible for credit risk.
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.