

# Supplementary Regulatory Capital Disclosures

**Q1 2020**

For the period ended: January 31, 2020

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**Scotiabank**

# SUPPLEMENTARY REGULATORY CAPITAL DISCLOSURES



January 31, 2020

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**This Appendix disclosure is based on OSFI's Pillar 3 disclosure requirements (April 2017), including subsequently issued Total Loss Absorbing Capital (May 2018), and Leverage ratio disclosure requirements (November 2018), and are primarily sourced from the BCBS' Revised Pillar 3 disclosure requirements - Phase 1 (2015) and its Technical Amendment to Regulatory Treatment of Accounting Provisions (August 2018).** This document is not audited and should be read in conjunction with our 2019 Annual Report.

Effective November 1, 2012, Canadian banks are subject to the revised capital adequacy requirements as published by the Basel Committee on Banking Supervision (BCBS) and commonly referred to as Basel III, as per OSFI's Capital Adequacy Requirements Guideline (CAR). Basel III builds on the "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (Basel II). Refer to page 4 "Basel III Implementation".

The Basel III Framework is comprised of three Pillars:

- Pillar 1 – methodologies that must be applied to calculate the minimum capital requirements.
- Pillar 2 – the requirement that banks have internal processes to assess their capital adequacy in relation to their strategies, risk appetite and actual risk profile. Regulators are expected to review these internal capital adequacy assessments.
- Pillar 3 – reflects the market disclosures required by banks to assist users of the information to better understand the risk profile.

Basel III classifies risk into three broad categories: credit risk, market risk and operational risk. Under Pillar 1 of the Basel III Framework, minimum capital for these three risks is calculated using one of the following approaches:

- Credit risk capital – Internal Ratings Based Approach (Advanced or Foundation) or Standardized Approach.
- Operational risk capital – Advanced Measurement Approach (AMA), Standardized Approach or Basic Indicator Approach.
- Market risk capital - Internal models or Standardized Approach.

#### Credit Risk

The credit risk component consists of on- and off- balance sheet claims. The Basel III rules are not applied to traditional balance sheet categories but to categories of on- and off- balance sheet exposures which represent general classes of assets/exposures (Corporate, Sovereign, Bank, Retail and Equity) based on their different underlying risk characteristics.

Generally, while calculating capital requirements, exposure types such as Corporate, Sovereign, Bank, Retail and Equity are analyzed by the following credit risk exposure sub-types: Drawn, Undrawn, Repo-style Transactions, Over-the-counter (OTC) Derivatives, Exchange Traded Derivatives and Other Off-balance Sheet claims.

OSFI approved the Bank's use of the Advanced Internal Ratings Based (AIRB) approach for credit risk in its material Canadian, US and European portfolios and for a significant portion of international corporate and commercial portfolios and Canadian retail portfolios. The Bank uses internal estimates, based on historical experience, for probability of default (PD), loss given default (LGD) and exposure at default (EAD). As described in CR2 of this Supplementary Regulatory Capital Disclosure, the definition of regulatory capital default is consistent with the accounting definitions described in the Bank's annual report, except that all products, including credit cards, may be defaulted when a contractual payment is 90 days in arrears.

- Under the AIRB approach, credit risk risk-weighted assets (RWA) are calculated by multiplying the capital requirement (K) by EAD times 12.5, where K is a function of the PD, LGD, maturity and prescribed correlation factors. This results in the capital calculations being more sensitive to underlying risks.

- Risk weights for exposures falling under the Securitization Framework are mainly computed under the following approaches: the Internal Ratings Based Approach (IRBA), External Ratings-Based Approach (ERBA), or the OSFI approved Internal Assessments Approach (IAA).
- IRBA risk weights are only applicable to retained exposures to securitizations of Bank originated receivables utilizing the Bank's existing OSFI approved AIRB model parameters.
- ERBA risk weights for other banking book exposures depend on the external ratings provided by the external credit assessment institutions (ECAI): S&P, Moody's and DBRS and are risk-weighted based on prescribed percentages incorporating effective maturity and STC (Simple, Transparent, Comparable) criteria, a mapping process consistent with OSFI's CAR.
- IAA risk weights for exposures to our asset-backed commercial paper conduits are based on a rating methodology similar to the criteria that are published by ECAs and therefore are similar to the methodologies used by these institutions. Our ratings process includes a comparison of the available credit enhancement in a securitization structure to a stressed level of projected losses. The stress level used is determined by the desired risk profile of the transaction. As a result, we stress the cash flows of a given transaction at a higher level in order to achieve a higher rating. Conversely, transactions that only pass lower stress levels achieve lower ratings. We periodically compare our own ratings to ECAs ratings to ensure that the ratings provided by ECAs are reasonable. We have developed asset class specific criteria guidelines which provide the rating methodologies for different asset classes. The guidelines are reviewed periodically and are subject to a model validation process, for compliance with Basel rules. The Bank's Global Risk Management (GRM) is responsible for providing risk assessments for capital purposes. GRM is independent of the business originating the securitization exposures and performs its own analysis, sometimes in conjunction with but always independent of the applicable business.
- A multiplier of 1.25 is applied to the correlation parameter of all exposures to all unregulated Financial Institutions, and regulated Financial Institutions with assets of at least US\$100 billion.
- Exchange-traded derivatives and other exposures to CCPs which previously were excluded from the capital calculation under Basel II are risk-weighted under Basel III.
- An overall scaling factor of 6% is added to the credit risk RWA for all AIRB portfolios. For the remaining portfolios, the Standardized Approach is used to compute credit risk.
- The Standardized Approach applies regulator prescribed risk weight factors to credit exposures based on the external credit assessments (public ratings), where available, and also considers other additional factors (e.g. loan-to-value for retail, eligible collateral, allowances, etc.).

#### Operational Risk

In January 2020, OSFI revised its capital requirements for operational risk in consideration of the final Basel III revisions published by the Basel Committee on Banking Supervision in December 2017. Effective Q1 2022, institutions will be required to use the revised Basel III Standardized Approach for operational risk. OSFI has plans for further consultation related to the 2022 domestic implementation of the final Basel III reforms which are expected to take place in late spring 2020. OSFI will provide more detail on the expected operational risk capital requirements that will apply, commencing Q1 2022.

In the interim, for fiscal years 2020 and 2021, institutions, previously approved for the Basel II Advanced Measurement Approach (AMA) for operational risk capital are to report using the existing Basel II Standardized Approach (TSA).

#### Market Risk

The Bank uses both internal models and standardized approaches to calculate market risk capital. Commencing Q1 2012, the Bank implemented additional market risk measures in accordance with Basel's Revisions of the Basel II market risk framework (July 2009). Additional measures include stressed Value-at-Risk, incremental risk charge and comprehensive risk measure.

This "Supplementary Regulatory Capital Disclosure" including the main features template that sets out a summary of information on the terms and conditions of the main features of all capital instruments is posted on the Bank's website as follows: <http://www.scotiabank.com/ca/en/0,,3066,00.htm>

Canadian banks are subject to the revised capital adequacy requirements as published by the Basel Committee on Banking Supervision (BCBS) - commonly referred to as Basel III - effective November 1, 2012. Basel III builds on the "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (Basel II). The Office of the Superintendent of Financial Institutions (OSFI) has issued guidelines, reporting requirements and disclosure guidance which are consistent with the Basel III reforms (except for implementation dates described below).

As compared to previous standards, Basel III places a greater emphasis on common equity by introducing a new category of capital, Common Equity Tier 1 (CET1), which consists primarily of common shareholders equity net of regulatory adjustments. These regulatory adjustments include goodwill, intangible assets, deferred tax assets, pension assets and investments in financial institutions over certain thresholds. Overall, the Basel III rules increase the level of regulatory deductions relative to Basel II. Basel III also increases the level of risk-weighted assets for significant investments and deferred tax amounts due to temporary timing differences under defined thresholds, exposures to large or unregulated financial institutions meeting specific criteria, exposures to centralized counterparties and exposures that give rise to wrong way risk.

To enable banks to meet the new standards, Basel III contained transitional arrangements commencing January 1, 2013, through January 1, 2019. Transitional requirements resulted in a phase-in of new deductions to common equity over 5 years. Under the transitional rules, all CET1 deductions were multiplied by a factor during the transitional period, beginning with 0% in 2013, 20% in 2014, 40% in 2015, 60% in 2016, 80% in 2017 and 100% in 2018 onwards. The portion of the CET1 regulatory adjustments not deducted during the transitional period continue to be subject to Basel II treatment. In addition, non-qualifying capital instruments will be phased-out over 10 years and the capital conservation buffer will be phased in over 4 years. As of January 2019, the banks are required to meet new minimum requirements related to risk-weighted assets of: Common Equity Tier 1 ratio of 4.5% plus a capital conservation buffer of 2.5%, collectively 7%. Including the capital conservation buffer, the minimum Tier 1 ratio is 8.5%, and the Total capital ratio is 10.5%.

OSFI required Canadian deposit-taking institutions to fully implement the 2019 Basel III reforms in 2013, without the transitional phase-in provisions for capital deductions, and achieve a minimum 7% common equity target, by the first quarter of 2013 along with a minimum Tier 1 ratio of 7% and Total capital ratio of 10%. Since the first quarter of 2014, the minimum Tier 1 ratio rose to 8.5% and the Total capital ratio rose to 10.5%.

The BCBS issued the rules on the assessment methodology for global systemically important banks (G-SIBs) and their additional loss absorbency requirements. In their view, additional policy measures for G-SIBs are required due to negative externalities (i.e., adverse side effects) created by systemically important banks which are not fully addressed by current regulatory policies. The assessment methodology for G-SIBs is based on an indicator-based approach and comprises five broad categories: size, interconnectedness, lack of readily available substitutes, global (cross-jurisdictional) activity and complexity. Additional loss absorbency requirements ranging from 1% to 3.5% of Common Equity Tier 1 depending upon a bank's systemic importance were introduced in parallel with the Basel III capital conservation and countercyclical buffers. Scotiabank is not designated as a G-SIB.

Since similar externalities can apply at a domestic level, the BCBS extended the G-SIBs framework to domestic systemically important banks (D-SIBs) focusing on the impact that a distress or failure would have on a domestic economy. Given that the D-SIB framework complements the G-SIB framework, the Committee considers that it would be appropriate if banks identified as D-SIBs by their national authorities are required by those authorities to comply with the principles in line with phase-in arrangements for the G-SIB framework, i.e., January 2016. In a March 2013 advisory letter, OSFI designated the 6 largest banks in Canada as domestic systemically important banks (D-SIBs), increasing their minimum capital ratio requirements by 1% for the identified D-SIBs. This 1% surcharge is applicable to all minimum capital ratio requirements for CET1, Tier 1 and Total Capital.

Effective January 2016, Scotiabank and other Canadian D-SIB banks are also required to meet new D-SIB minimum requirements; a minimum Common Equity Tier 1 ratio of 8.0%, Tier 1 ratio of 9.5% and a Total capital ratio of 11.5% as a Pillar 1 requirement.

In June 2018, in order to provide increased transparency to the market, OSFI clarified its additional requirement for its Domestic Stability Buffer, already held by D-SIBs as a Pillar 2 buffer requirement. The Domestic Stability Buffer will range between 0 and 2.5% of a bank's total RWA. The buffer is presently set at 2.25%, effective April 30, 2020. OSFI will review the buffer on a semi-annual basis.

In December 2013, OSFI announced its decision to implement the phase-in (over 5 years) of the regulatory capital for Credit Valuation Adjustment (CVA) on Bilateral OTC Derivatives effective Q1 2014. In accordance with OSFI's requirements, commencing in Q1, 2019, the CVA risk-weighted assets have been fully phased-in (scalars of 0.80, 0.83 and 0.86, were used to compute the CET1 capital ratio, Tier 1 capital ratio and Total capital ratio, respectively in Fiscal 2018).

OSFI required Canadian deposit-taking institutions to implement the BCBS' countercyclical buffer requirements, starting Q1, 2017. The countercyclical buffer is only applicable to private sector credit exposures in jurisdictions with published buffer requirements. At present only six jurisdictions apply a non-zero countercyclical buffer and the Bank's exposures within these six jurisdictions are not material.

Risk-weighted assets are computed on an all-in Basel III basis unless otherwise indicated. All-in is defined as capital calculated to include all of the regulatory adjustments that is required commencing 2019 but retaining the phase-out rules for non-qualifying capital instruments.

As at January 31, 2013, all of the Bank's preferred shares, capital instruments and subordinated debentures did not meet these additional criteria and are subject to phase-out commencing January 2013. The Bank reserves the right to redeem, call or repurchase any capital instruments within the terms of each offering at any time in the future.

Commencing in 2015, the Bank issued subordinated debentures, additional Tier 1 instruments, and preferred shares which contain non-viability contingent capital (NVCC) provisions necessary for the preferred shares and debentures to qualify as Tier 1 or Tier 2 regulatory capital. Under the NVCC provisions, the preferred shares and debentures are convertible into a variable number of common shares upon: (i) the public announcement by OSFI that the Bank has ceased, or is about to cease, to be viable; or (ii) by a federal or provincial government of Canada that the Bank accepted or agreed to accept a capital injection.

In addition to risk-based capital requirements, the Basel III reforms introduced a simpler, non risk-based Leverage ratio requirement to act as a supplementary measure to its risk-based capital requirements. The Leverage ratio is defined as a ratio of Basel III Tier 1 capital to a leverage exposure measure which includes on-balance sheet assets and off-balance sheet commitments, derivatives and securities financing transactions, as defined within the requirements. As a member of the BCBS, OSFI has adopted the Basel III Leverage requirements as part of its domestic requirements for banks, bank holding companies, and federally regulated trust and loan companies in Canada.

In November 2018, OSFI revised its Leverage Requirements Guideline which outlines the application of the Basel III Leverage ratio in Canada. Institutions are expected to maintain a material operating buffer above the 3% minimum. The Bank meets OSFI's authorized leverage ratio. Commencing Q1 2015, disclosure in accordance with OSFI's September 2018 Public Disclosure Requirements related to the Basel III Leverage ratio has been made in the Supplementary Regulatory Capital Disclosures.

Since the introduction of Basel II in 2008, OSFI has prescribed a minimum capital floor requirement for institutions that use the AIRB approach for credit risk. Effective Q2 2018, OSFI replaced the Basel I regulatory capital floor with a capital floor based on 70% of the Basel II standardized approach for credit risk RWAs (increasing to 72.5% in Q3 2018 and to 75% thereafter). Revised capital floor requirements also include risk-weighted assets for market risk and CVA.

On September 23, 2018, the regulations under the Canada Deposit Insurance Corporation Act (Canada) (the "CDIC Act") and the Bank Act (Canada) (collectively, the "Bail-In Regulations") providing the details of conversion, issuance and compensation regimes for bail-in instruments issued by D-SIBs, including the Bank, came into force. On April 18, 2018, OSFI issued guidelines on Total Loss Absorbing Capacity (TLAC), which will apply to Canada's D-SIBs as part of the Federal Government's bail-in regime. OSFI provided notification requiring systemically important banks to maintain a minimum of 21.5% plus the domestic stability buffer of TLAC eligible instruments relative to their RWAs and 6.75% relative to their leverage exposures, effective Q1 2022. The Bank is required to disclose its TLAC ratios. Please refer to KM2.

# REGULATORY CAPITAL HIGHLIGHTS

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(in \$MM)	Basel III				
	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
<b>Common Equity Tier 1 capital</b>	<b>47,804</b>	46,578	46,565	46,193	45,344
<b>Tier 1 capital</b>	<b>52,437</b>	51,304	51,371	51,709	50,869
<b>Total capital</b>	<b>61,392</b>	59,850	61,546	60,855	59,796
<b>Risk-weighted Assets<sup>(1)</sup></b>					
Capital Risk-weighted Assets	<b>420,694</b>	421,185	417,058	415,212	408,565
<b>Capital Ratios (%)</b>					
Common Equity Tier 1 (as a percentage of risk-weighted assets)	<b>11.4</b>	11.1	11.2	11.1	11.1
Tier 1 (as a percentage of risk-weighted assets)	<b>12.5</b>	12.2	12.3	12.5	12.5
Total capital (as a percentage of risk-weighted assets)	<b>14.6</b>	14.2	14.8	14.7	14.6
<b>Leverage:</b>					
Leverage Exposures <sup>(1)</sup>	<b>1,300,001</b>	1,230,648	1,211,612	1,204,111	1,167,691
Leverage Ratio (%)	<b>4.0</b>	4.2	4.2	4.3	4.4
<b>OSFI Pillar 1 Target: All-in Basis (%)</b>					
Common Equity Tier 1 minimum ratio	<b>8.0</b>	8.0	8.0	8.0	8.0
Tier 1 capital all-in minimum ratio	<b>9.5</b>	9.5	9.5	9.5	9.5
Total capital all-in minimum ratio	<b>11.5</b>	11.5	11.5	11.5	11.5
Leverage all-in minimum ratio	<b>3.0</b>	3.0	3.0	3.0	3.0
<b>Capital instruments subject to phase-out arrangements</b>					
Current cap on Additional Tier 1 (AT1) instruments subject to phase-out arrangements (%)	<b>20</b>	30	30	30	30
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	<b>117</b>	-	-	113	113
Current cap on Tier 2 (T2) instruments subject to phase-out arrangements (%)	<b>20</b>	30	30	30	30
Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	-	-	-	-

(1) IFRS 16 was adopted prospectively effective November 1, 2019 (Q1/20), prior period amounts have not been restated and are not comparable.



# EXPOSURE AT DEFAULT AND RISK-WEIGHTED ASSETS FOR CREDIT RISK PORTFOLIOS

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(in \$MM)	Sub-type	Q1 2020								Q4 2019	
		AIRB		Standardized		Total		% AIRB		Total	
		EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>
Exposure Type											
Non-Retail											
Corporate	Drawn	176,791	83,773	52,723	49,489	229,514	133,262	77%	63%	225,411	133,72
	Undrawn	96,183	33,602	3,572	3,534	99,755	37,136	96%	90%	96,710	37,29
	Other <sup>(3)</sup>	50,154	11,036	2,944	2,927	53,098	13,963	94%	79%	50,261	14,28
	Total	323,128	128,411	59,239	55,950	382,367	184,361	85%	70%	372,382	185,31
Bank	Drawn	25,111	3,441	2,550	2,420	27,661	5,861	91%	59%	21,786	5,31
	Undrawn	3,344	503	130	130	3,474	633	96%	79%	2,607	55
	Other <sup>(3)</sup>	10,949	1,246	62	62	11,011	1,308	99%	95%	9,844	1,21
	Total	39,404	5,190	2,742	2,612	42,146	7,802	93%	67%	34,237	7,08
Sovereign	Drawn	117,837	3,367	6,383	692	124,220	4,059	95%	83%	105,047	4,49
	Undrawn	891	99	3	2	894	101	100%	98%	844	12
	Other <sup>(3)</sup>	3,270	80	2	-	3,272	80	100%	100%	2,992	6
	Total	121,998	3,546	6,388	694	128,386	4,240	95%	84%	108,883	4,68
Total Non-Retail	Drawn	319,739	90,581	61,656	52,601	381,395	143,182			352,244	143,53
	Undrawn	100,418	34,204	3,705	3,666	104,123	37,870			100,161	37,98
	Other <sup>(3)</sup>	64,373	12,362	3,008	2,989	67,381	15,351			63,097	15,56
	Total	484,530	137,147	68,369	59,256	552,899	196,403			515,502	197,07
Retail											
Residential Mortgages	Drawn	220,643	20,688	44,687	18,101	265,330	38,789	83%	53%	265,100	40,48
	Undrawn	-	-	-	-	-	-			-	-
	Total	220,643	20,688	44,687	18,101	265,330	38,789	83%	53%	265,100	40,48
Secured Lines Of Credit	Drawn	20,695	4,305	-	-	20,695	4,305	100%	100%	21,130	3,84
	Undrawn	16,986	967	-	-	16,986	967	100%	100%	18,524	1,10
	Total	37,681	5,272	-	-	37,681	5,272	100%	100%	39,654	4,94
Qualifying Revolving Retail Exposures (QRRE)	Drawn	15,939	10,281	-	-	15,939	10,281	100%	100%	16,046	9,19
	Undrawn	30,938	3,945	-	-	30,938	3,945	100%	100%	29,839	3,80
	Total	46,877	14,226	-	-	46,877	14,226	100%	100%	45,885	13,00
Other Retail	Drawn	31,509	16,045	43,255	32,157	74,764	48,202	42%	33%	77,508	49,32
	Undrawn	2,670	843	-	-	2,670	843	100%	100%	2,480	77
	Total	34,179	16,888	43,255	32,157	77,434	49,045	44%	34%	79,988	50,10
Total Retail	Drawn	288,786	51,319	87,942	50,258	376,728	101,577			379,784	102,85
	Undrawn	50,594	5,755	-	-	50,594	5,755			50,843	5,68
	Total	339,380	57,074	87,942	50,258	427,322	107,332			430,627	108,53
Securitizations <sup>(4)</sup>		19,835	3,410	5,311	1,793	25,146	5,203	79%	66%	23,305	1,96
Trading Derivatives		22,964	6,831	1,170	1,161	24,134	7,992	95%	85%	24,090	8,04
Derivatives - credit valuation adjustment <sup>(5)</sup>		-	5,558	-	-	-	5,558			-	6,53
Total Credit Risk (Excluding Equities & Other Assets)		866,709	210,020	162,792	112,468	1,029,501	322,488			993,524	322,15
Equities		2,881	2,605	-	-	2,881	2,605	100%	100%	2,279	2,13
Other Assets <sup>(6)</sup>		-	-	62,547	27,372	62,547	27,372			61,320	29,03
Total Credit Risk (Before Scaling Factor)		869,590	212,625	225,339	139,840	1,094,929	352,465			1,057,123	353,32
Add-on for 6% Scaling Factor <sup>(7)</sup>			12,219				12,219				12,10
Total Credit Risk		869,590	224,844	225,339	139,840	1,094,929	364,684			1,057,123	365,43

- (1) Exposure at default, before credit risk mitigation for AIRB exposures, after related IFRS 9 allowances for credit losses for Standardized exposures.
- (2) Risk-Weighted Assets used for calculation of CET1, Tier 1, and Total Capital ratios.
- (3) Includes lending instruments such as letters of credit and letters of guarantee; banking book derivatives and repo-style exposures, net of related collateral.
- (4) Transitional provisions benefit under OSFI's revised securitizations framework, was applied in fiscal 2019 and is no longer applicable.
- (5) In accordance with OSFI's requirements, commencing Q1 2019, the CVA risk-weighted assets, have been fully phased-in.
- (6) Other Assets include exposures related to central counterparties (CCPs).
- (7) The Basel Framework requires an additional 6% scaling factor to AIRB credit risk portfolios (excluding CVA, and Securitizations).

**KM2: Key metrics – TLAC requirements  
(at resolution group level)**



(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
<b>Resolution group 1</b>					
1	Total Loss Absorbing Capacity (TLAC) available	78,835	70,735	68,561	65,656
2	Total RWA at the level of the resolution group	420,694	421,185	417,058	415,212
3	TLAC as a percentage of RWA (row 1 / row 2) (%)	18.7%	16.8%	16.4%	15.8%
4	Leverage exposure measure at the level of the resolution group	1,300,001	1,230,648	1,211,612	1,204,111
5	TLAC as a percentage of leverage exposure measure (row 1 / row 4) (%)	6.1%	5.7%	5.7%	5.5%
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	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
6c	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with Excluded Liabilities and that is recognized as external TLAC, divided by funding issued that ranks pari passu with Excluded Liabilities and that would be recognized as external TLAC if no cap was applied (%)	N/A	N/A	N/A	N/A

(1) 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 arrangements for the adoption of IFRS 9 ECL.



# Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	<b>Part 2 - OVA – Bank risk management approach</b>	<b>Annual</b>				
	Banks must describe their risk management objectives and policies, in particular:	Annual				
(a)	How the business model determines and interacts with the overall risk profile (eg the key risks related to the business model and how each of these risks is reflected and described in the risk disclosures) and how the risk profile of the bank interacts with the risk tolerance approved by the board.	Annual	<a href="#">69-106</a>			
(b)	The risk governance structure: responsibilities attributed throughout the bank (eg oversight and delegation of authority; breakdown of responsibilities by type of risk, business unit etc); relationships between the structures involved in risk management processes (eg board of directors, executive management, separate risk committee, risk management structure, compliance function, internal audit function).	Annual	<a href="#">69-74</a>			
(c)	Channels to communicate, decline and enforce the risk culture within the bank (eg code of conduct; manuals containing operating limits or procedures to treat violations or breaches of risk thresholds; procedures to raise and share risk issues between business lines and risk functions).	Annual	<a href="#">70-74</a>			
(d)	The scope and main features of risk measurement systems.	Annual	<a href="#">72, 75, 81, 89-92, 106</a>			
(e)	Description of the process of risk information reporting provided to the board and senior management, in particular the scope and main content of reporting on risk exposure.	Annual	<a href="#">69-71, 89</a>			
(f)	Qualitative information on stress testing (eg portfolios subject to stress testing, scenarios adopted and methodologies used, and use of stress testing in risk management).	Annual	<a href="#">72-73, 79, 89-91, 92, 94</a>	<a href="#">232-233</a>		
(g)	The strategies and processes to manage, hedge and mitigate risks that arise from the bank's business model and the processes for monitoring the continuing effectiveness of hedges and mitigants.	Annual	<a href="#">71, 75, 78-83, 85, 87, 91</a>	<a href="#">160, 179-181</a>		
	<b>Part 3 - LIA – Explanations of differences between accounting and regulatory exposures amounts</b>	<b>Annual</b>				
	Banks must explain the origins of the differences between accounting amounts, as reported in financial statements amounts and regulatory exposure amounts, as displayed in templates LI1 and LI2.	Annual				
(a)	Banks must explain the origins of any significant differences between the amounts in columns (a) and (b) in LI1.	Annual			<a href="#">LI1</a>	
(b)	Banks must explain the origins of differences between carrying values and amounts considered for regulatory purposes shown in LI2.	Annual			<a href="#">LI2</a>	
	In accordance with the implementation of the guidance on prudent valuation, banks must describe systems and controls to ensure that the valuation estimates are prudent and reliable. Disclosure must include:	Annual				

# Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	• Valuation methodologies, including an explanation of how far mark-to-market and mark-to-model methodologies are used.	Annual	<a href="#">83, 108-109</a>	<a href="#">153, 160, 168-169, 172-173, 233</a>		
(c)	• Description of the independent price verification process.	Annual	<a href="#">108-109</a>	<a href="#">168-169</a>		
	• Procedures for valuation adjustments or reserves (including a description of the process and the methodology for valuing trading positions by type of instrument).	Annual	<a href="#">108-109</a>	<a href="#">153</a>		
	<b>Part 4 - CRA – General qualitative information about credit risk</b>	<b>Annual</b>				
	Banks must describe their risk management objectives and policies for credit risk, focusing in particular on:	Annual				
(a)	How the business model translates into the components of the bank's credit risk profile	Annual	<a href="#">70, 74</a>			
(b)	Criteria and approach used for defining credit risk management policy and for setting credit risk limits	Annual	<a href="#">74, 81</a>			
(c)	Structure and organization of the credit risk management and control function	Annual	<a href="#">72, 74, 81</a>			
(d)	Relationships between the credit risk management, risk control, compliance and internal audit functions	Annual	<a href="#">72, 74, 81</a>			
(e)	Scope and main content of the reporting on credit risk exposure and on the credit risk management function to the executive management and to the board of directors	Annual	<a href="#">72, 74, 81</a>			
	<b>Part 4 - CRB – Additional disclosure related to the credit quality of assets</b>	<b>Annual</b>				
	Banks must provide the following disclosures:					
	<b>Qualitative disclosures</b>	Annual				
(a)	The scope and definitions of "past due" and "impaired" exposures used for accounting purposes and the differences, if any, between the definition of past due and default for accounting and regulatory purposes.	Annual		<a href="#">155, 157</a>	<a href="#">Overview</a>	
(b)	The extent of past-due exposures (more than 90 days) that are not considered to be impaired and the reasons for this.	Annual		<a href="#">155, 157, 196</a>		
(c)	Description of methods used for determining accounting provisions for credit losses. In addition, banks that have adopted an ECL accounting model must provide information on the rationale for categorization of ECL accounting provisions in general and specific categories for standardized approach exposures.	Annual		<a href="#">157-158</a>	<a href="#">CR1</a>	
(d)	The bank's own definition of a restructured exposure. (i.e. modified loans)	Annual		<a href="#">155</a>		
	<b>Quantitative disclosures</b>	Annual				
(e)	Breakdown of exposures by geographical areas, industry and residual maturity;	Annual				
	(i) Geography	Annual	<a href="#">116, 121</a>	<a href="#">189</a>		
	(ii) Industry	Annual	<a href="#">118</a>			
	(iii) Residual Maturity	Annual	<a href="#">100, 121</a>	<a href="#">190</a>		

# Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
(f)	Amounts of impaired exposures (according to the definition used by the bank for accounting purposes) and related allowances and write-offs, broken down by geographical areas and industry;	Annual				
	(i) Geography	Annual			<a href="#">Impaired by Region</a>	
	(ii) Industry	Annual			<a href="#">Impaired by Industry</a>	
(g)	Ageing analysis of accounting past-due exposures;	Annual		<a href="#">196</a>		
(h)	Breakdown of restructured exposures between impaired and not impaired	Annual		<a href="#">195</a>		
	<b>Part 4 - Table CRC: Qualitative disclosure requirements related to credit risk mitigation techniques</b>	<b>Annual</b>				
	Banks must disclose:	Annual				
(a)	Core features of policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting.	Annual	<a href="#">82-83</a>	<a href="#">177-179, 184</a>		
(b)	Core features of policies and processes for collateral evaluation and management.	Annual	<a href="#">82-83</a>			
(c)	Information about market or credit risk concentrations under the credit risk mitigation instruments used (ie by guarantor type, collateral and credit derivative providers).	Annual	<a href="#">75, 82-83, 84-85</a>	<a href="#">230</a>		
	<b>Part 4 - CRD: Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk</b>	<b>Annual</b>				
	A. For portfolios that are risk-weighted under the standardized approach for credit risk, banks must disclose the following information:	Annual				
(a)	Names of the external credit assessment institutions (ECAIs) and export credit agencies (ECAs) used by the bank, and the reasons for any changes over the reporting period;	Annual	<a href="#">61</a>	<a href="#">230</a>		
(b)	The asset classes for which each ECAI or ECA is used;	Annual	<a href="#">61</a>	<a href="#">227, 230</a>	<a href="#">EAD RWA</a>	
(c)	A description of the process used to transfer the issuer to issue credit ratings onto comparable assets in the banking book (see paragraphs 99–101 of the Basel framework); and	Annual	<a href="#">61</a>	<a href="#">230</a>		
(d)	The alignment of the alphanumerical scale of each agency used with risk buckets (except where the relevant supervisor publishes a standard mapping with which the bank has to comply).	Annual	<a href="#">61</a>	<a href="#">230</a>		
	<b>Part 4 - CRE: Qualitative disclosures related to IRB models</b>	<b>Annual</b>				
	Banks must provide the following information on their use of IRB models:	Annual				
(a)	Internal model development, controls and changes: role of the functions involved in the development, approval and subsequent changes of the credit risk models.	Annual	<a href="#">61-63, 81-83</a>			

# Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
(b)	Relationships between risk management function and internal audit function and procedure to ensure the independence of the function in charge of the review of the models from the functions responsible for the development of the models.	Annual	<a href="#">69, 71</a>			
(c)	Scope and main content of the reporting related to credit risk models.	Annual	<a href="#">61-63</a>	<a href="#">227-230</a>	<a href="#">Overview</a>	
(d)	Scope of the supervisor's acceptance of approach.	Annual	<a href="#">61</a>			
(e)	For each of the portfolios, the bank must indicate the part of EAD within the group (in percentage of total EAD) covered by standardized, FIRB and AIRB approach and the part of portfolios that are involved in a roll-out plan.	Annual			<a href="#">Overview</a> <a href="#">EAD_RWA</a>	
(f)	The number of key models used with respect to each portfolio, with a brief discussion of the main differences among the models within the same portfolios.	Annual	<a href="#">61-63</a>	<a href="#">227-230</a>		
(g)	Description of the main characteristics of the approved models: (i) definitions, methods and data for estimation and validation of PD (eg how PDs are estimated for low default portfolios; if there are regulatory floors; the drivers for differences observed between PD and actual default rates at least for the last three periods); and where applicable: (ii) LGD (eg methods to calculate downturn LGD; how LGDs are estimated for low default portfolio; the time lapse between the default event and the closure of the exposure); (iii) credit conversion factors, including assumptions employed in the derivation of these variables;	Annual	<a href="#">61-63</a>	<a href="#">227-230</a>		
	<b>Part 5 - CCRA: Qualitative disclosure related to counterparty credit risk</b>	<b>Annual</b>				
	Banks must provide:	Annual				
(a)	Risk management objectives and policies related to counterparty credit risk, including:	Annual				
(b)	The method used to assign the operating limits defined in terms of internal capital for counterparty credit exposures and for CCP exposures;	Annual	<a href="#">70-71, 81</a>	<a href="#">177-178</a>		
(c)	Policies relating to guarantees and other risk mitigants and assessments concerning counterparty risk, including exposures towards CCPs;	Annual	<a href="#">72, 81</a>	<a href="#">178, 231</a>		
(d)	Policies with respect to wrong-way risk exposures;	Annual	<a href="#">83</a>	<a href="#">241</a>		
(e)	The impact in terms of the amount of collateral that the bank would be required to provide given a credit rating downgrade.	Annual	<a href="#">96</a>			

# Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	<b>Part 6 - SECA: Qualitative disclosure requirements related to securitization exposures</b>	<b>Annual</b>				
	<b>Qualitative disclosures</b>	<b>Annual</b>				
	Banks must describe their risk management objectives and policies for securitization activities and main features of these activities according to the framework below. If a bank holds securitization positions reflected both in the regulatory banking book and in the regulatory trading book, the bank must describe each of the following points by distinguishing activities in each of the regulatory books.	Annual				
	(a) The bank's objectives in relation to securitization and re-securitization activity, including the extent to which these activities transfer credit risk of the underlying securitized exposures away from the bank to other entities, the type of risks assumed and the types of risks retained.	Annual	<a href="#">64-66, 110</a>	<a href="#">197-200</a>		
	(b) The bank must provide a list of:	Annual				
	• special purpose entities (SPEs) where the bank acts as sponsor (but not as an originator such as an Asset Backed Commercial Paper (ABCP) conduit), indicating whether the bank consolidates the SPEs into its scope of regulatory consolidation;	Annual	<a href="#">64-66</a>	<a href="#">197-200</a>		
	• affiliated entities (i) that the bank manages or advises and (ii) that invest either in the securitization exposures that the bank has securitized or in SPEs that the bank sponsors; and	Annual	<a href="#">64-66</a>	<a href="#">197-200</a>		
	• a list of entities to which the bank provides implicit support and the associated capital impact for each of them (as required in paragraphs 551 and 564 of the securitization framework).	Annual	n/a			
	(c) Summary of the bank's accounting policies for securitization activities.	Annual	<a href="#">110</a>	<a href="#">197-200</a>		
	(d) If applicable, the names of external credit assessment institution (ECAIs) used for securitizations and the types of securitization exposure for which each agency is used.	Annual			<a href="#">Overview</a>	
	(e) If applicable, describe the process for implementing the Basel internal assessment approach (IAA). The description should include:	Annual			<a href="#">Overview</a>	
	• structure of the internal assessment process and relation between internal assessment and external ratings, including information on ECAIs as referenced in item (d) of this table;	Annual			<a href="#">Overview</a>	
	• control mechanisms for the internal assessment process including discussion of independence, accountability, and internal assessment process review; and	Annual			<a href="#">Overview</a>	
	• the exposure type to which the internal assessment process is applied; and stress factors used for determining credit enhancement levels, by exposure type.	Annual			<a href="#">Overview</a>	
	(f) Banks must describe the use of internal assessment other than for IAA capital purposes.	Annual	n/a			

## Summary of Qualitative Requirements - Pillar III (Cross Referenced)



Item #	Pillar III - Requirements - Qualitative	Frequency	2019 Annual Report: MD&A	2019 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	<b>Part 7 - Market risk</b>					
	OSFI revised Pillar 3 Market Risk disclosure requirements allow for a continuation of the existing Basel 2.5 Market Risk disclosures until the implementation of the next phase of Pillar 3 disclosures in Canada. <b>As a result, the Bank's Market Risk disclosures continue to be based on Basel 2.5 disclosure requirements.</b> OSFI's requirements for Pillar 3 Requirements may be found in ( <a href="http://www.osfi-bsif.gc.ca/Eng/fi-if/rg-ro/gdn-ort/gld/Pages/plr3.aspx">http://www.osfi-bsif.gc.ca/Eng/fi-if/rg-ro/gdn-ort/gld/Pages/plr3.aspx</a> ).		n/a			
	<b>Part 8 - Operational risk</b>					
	(a) In addition to the general qualitative disclosure requirement (paragraph 824), the approach(es) for operational risk capital assessment for which the bank qualifies.	Annual	<a href="#">64</a>			
	(b) Description of the advanced measurement approaches for operational risk (AMA), if used by the bank, including a discussion of relevant internal and external factors considered in the bank's measurement approach. In the case of partial use, the scope and coverage of the different approaches used/applied in regulatory capital.	Annual	n/a	n/a	n/a	
	(c) For banks using the AMA, a description of the use of insurance for the purpose of mitigating operational risk.		n/a			
	<b>Part 9 - Interest rate risk in the banking book (IRRBB)</b>					
	(a) The general qualitative disclosure requirement (paragraph 824), including the nature of IRRBB and key assumptions, including assumptions regarding loan prepayments and behaviour of non-maturity deposits, and frequency of IRRBB measurement.	Annual	<a href="#">90-91</a>	<a href="#">232</a>		

# OV1 – Overview of RWA



(in \$MM)		a	b	b <sub>2</sub>	b <sub>3</sub>	c
		CET1 RWA <sup>(1)</sup>				Minimum capital requirements <sup>(2)</sup>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2020
1	Credit risk (excluding counterparty credit risk)	326,956	325,064	323,138	322,206	26,156
2	Of which: standardized approach (SA) <sup>(3)</sup>	126,023	125,205	128,419	134,356	10,082
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	200,933	199,859	194,719	187,850	16,074
6	Counterparty credit risk (CCR)	14,385	14,075	13,951	13,699	1,151
7	Of which: standardized approach for counterparty credit risk (SA-CCR) <sup>(4)</sup>	1,257	1,502	1,494	1,265	101
8	Of which: Internal Model Method (IMM)	7,827	7,727	7,449	6,810	626
9	Of which: other CCR <sup>(5)</sup>	5,301	4,846	5,008	5,624	424
10	Credit valuation adjustment (CVA)	5,558	6,537	5,405	5,840	445
11	Equity positions under the simple risk weight approach	-	-	-	-	-
12	Equity investments in funds – look-through approach	552	506	435	412	44
13	Equity investments in funds – mandate-based approach	150	148	157	162	12
14	Equity investments in funds – fall-back approach	1	1	102	2	-
15	Settlement risk	-	-	-	-	-



## OV1 – Overview of RWA



(in \$MM)		a	b	b <sub>2</sub>	b <sub>3</sub>	c
		CET1 RWA <sup>(1)</sup>				Minimum capital requirements <sup>(2)</sup>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2020
16	Securitization exposures in banking book	5,203	4,863	4,959	4,945	416
16a	Less: Offset for 2019 transitional adjustment <sup>(6)</sup>	-	(2,896)	(2,896)	(2,896)	-
17	Of which: securitization internal ratings-based approach (SEC-IRBA)	205	-	-	-	16
18	Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	4,940	4,806	4,886	4,871	395
19	Of which: securitization standardized approach (SEC-SA)	58	57	73	74	5
20	Market risk	9,599	8,674	7,755	7,049	768
21	Of which: standardized approach (SA)	828	615	527	466	66
22	Of which: internal model approaches (IMA)	8,771	8,059	7,228	6,583	702
23	Capital charge for switch between trading book and banking book	-	-	-	-	-
24	Operational risk	46,411	47,079	46,696	46,471	3,713
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	11,879	17,134	17,356	17,322	950
26	Floor adjustment	-	-	-	-	-
27	<b>Total (1 + 6 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 16a + 20 + 23 + 24 + 25 + 26)</b>	<b>420,694</b>	<b>421,185</b>	<b>417,058</b>	<b>415,212</b>	<b>33,655</b>

(1) RWA: risk-weighted assets according to the Basel framework, including the 1.06 AIRB scaling factor applied to AIRB credit risk portfolios (excluding CVA, and Securitizations).

(2) Minimum capital requirement: Pillar 1 capital requirements are RWA \* 8%.

(3) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% AIRB scalar requirement.

(4) SA-CCR was implemented for Capital reporting in Q1, 2019.

(5) Includes SFT and CCP Default Fund.

(6) Transitional provisions benefit under OSFI's revised securitizations framework was applied in fiscal 2019. The benefit is no longer applicable starting in Q1 2020.

**LI1 – Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories <sup>(1)</sup>**



Q1 2020 (in \$MM)	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items: <sup>(2)</sup>				
			Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital <sup>(3)</sup>
<b>Assets</b>							
Cash and deposits with financial institutions	69,291	69,202	69,202	-	-	-	-
Precious metals	3,616	3,616	3,616	-	-	3,616	-
Trading assets							
Securities	128,071	128,064	21	-	-	128,043	-
Loans	15,815	15,815	8,489	-	-	15,375	-
Other	845	845	-	-	-	845	-
Financial instruments designated at fair value through profit or loss	-	-	-	-	-	-	-
Securities purchased under resale agreements and securities borrowed	146,432	146,432	-	146,432	-	-	-
Derivative financial instruments	43,083	43,083	-	43,083	-	39,196	-
Investment securities	78,003	76,896	76,896	-	-	-	-
<b>Loans</b>							
Residential mortgages <sup>(4)</sup>	268,670	268,566	268,566	-	-	-	-
Personal loans	96,703	96,692	94,058	-	2,634	-	-
Credit cards	17,715	17,715	13,861	-	531	-	3,323
Business and government	214,212	214,207	206,228	-	7,823	-	156
Allowance for credit loss	(5,021)	(5,020)	(4,897)	-	-	-	(123)
Customers' liability under acceptances, net of allowance	21,364	21,364	21,364	-	-	-	-
Property and equipment	6,103	6,101	6,101	-	-	-	-
Investments in associates	2,327	2,623	2,623	-	-	-	-
Goodwill and other intangible assets	17,191	17,516	1,820	-	-	-	15,696
Deferred tax assets	1,718	1,717	1,446	-	-	-	271
Other assets	27,884	25,458	18,173	6,822	-	-	463
<b>Total assets</b>	<b>1,154,022</b>	<b>1,150,892</b>	<b>787,567</b>	<b>196,337</b>	<b>10,988</b>	<b>187,075</b>	<b>19,786</b>

**LI1 – Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories <sup>(1)</sup>**



Q1 2020 (in \$MM)	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items: <sup>(2)</sup>				
			Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital <sup>(3)</sup>
<b>Liabilities</b>							
<b>Deposits</b>							
Personal	223,881	223,881	-	-	-	-	223,881
Business and government	488,658	488,658	-	-	-	-	488,658
Financial institutions	51,311	51,311	-	-	-	-	51,311
Financial instruments designated at fair value through profit or loss	12,994	12,994	-	-	-	-	12,994
Acceptances	21,389	21,389	-	-	-	-	21,389
Obligations related to securities sold short	32,439	32,439	-	-	-	32,439	-
Derivative financial instruments	43,139	43,139	-	43,139	-	38,019	-
Obligations related to securities sold under repurchase agreements and securities lent	143,019	143,019	-	143,019	-	-	-
Subordinated debentures	7,295	7,295	-	-	-	-	7,295
Other liabilities	60,036	56,906	-	-	-	5,799	51,107
<b>Total liabilities</b>	<b>1,084,161</b>	<b>1,081,031</b>	<b>-</b>	<b>186,158</b>	<b>-</b>	<b>76,257</b>	<b>856,635</b>

(1) Based on the Consolidated Statement of Financial Position as reported in the Bank's Q1 2020 Quarterly Report. Effective Q1 2018, the Bank fully adopted IFRS 9 (Financial Instruments).

(2) A single item may attract capital charges according to more than one risk category framework.

(3) Includes capital deductions net of associated deferred tax liabilities, and securitized credit card exposures not subject to capital requirements for assets.

(4) Includes \$79.4 billion in mortgages guaranteed by Canada Mortgage Housing Corporation (CMHC), including 90% of privately insured mortgages.

## LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements



Q1 2020 (in \$MM)		a	b	c	d	e
		Total	Items subject to: <sup>(1)</sup>			
			Credit risk framework	Securitization framework	Counterparty credit risk framework	Market risk framework
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	1,131,106	787,567	10,988	196,337	187,075
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	262,415	-	-	186,158	76,257
3	Total net amount under regulatory scope of consolidation	868,691	787,567	10,988	10,179	110,818
4	Off-balance sheet amounts <sup>(2)</sup>	198,498	183,699	14,158	641	-
5	Differences in valuations <sup>(3)</sup>	(1,060)	(1,060)	-	-	-
6	Differences due to different netting rules, other than those already included in row 2	154,484	934	-	153,550	-
7	Differences due to considerations of provisions <sup>(4)</sup>	3,556	3,788	-	(232)	-
8	Collateral offsetting	(139,059)	-	-	(139,059)	-
9	Differences due to Potential Future Exposures and Collateral Haircut	53,518	-	-	53,518	-
10	Differences due to deconsolidated subsidiaries	-	-	-	-	-
11	Other differences not classified above	(2)	(2)	-	-	-
12	Exposure amounts considered for regulatory purposes <sup>(5)</sup>	1,138,626	974,926	25,146	78,597	110,818

(1) A single item can attract capital charges according to more than one risk category framework.

(2) Includes undrawn commitments and letters of credit/guarantee after application of the credit conversion factors, unfunded securitization exposures, and unfunded default fund contributions.

(3) Includes fair value adjustments for credit risk items (loans, bonds).

(4) Amounts for AIRB exposures are reported gross of partial write-offs and IFRS 9 specific allowances, and amounts for Standardized exposures are reported net of partial write-offs and IFRS 9 specific allowances.

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

**CC1 – Composition of regulatory capital**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	b
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation <sup>(1)</sup>
<b>Common Equity Tier 1 capital: instruments and reserves</b>						
1	Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	18,292	18,311	18,348	18,361	u+y
2	Retained earnings	45,418	44,439	43,682	43,056	v
3	Accumulated other comprehensive income (and other reserves)	(543)	570	1,187	1,836	w
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)	1,698	1,734	1,732	1,689	bb
6	<b>Common Equity Tier 1 capital before regulatory adjustments</b>	64,865	65,054	64,949	64,942	
<b>Common Equity Tier 1 capital: regulatory adjustments</b>						
7	Prudential valuation adjustments	-	-	-	-	
8	Goodwill (net of related tax liability)	(9,723)	(10,146)	(10,349)	(10,761)	g
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	(5,973)	(5,998)	(5,929)	(5,999)	h-q+i-r
10	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	(271)	(286)	(295)	(310)	k
11	Cash flow hedge reserve	(725)	(650)	(533)	(138)	x
12	Shortfall of provisions to expected losses	-	-	-	-	ee
13	Securitization gain on sale	-	-	-	-	
14	Gains and losses due to changes in own credit risk on fair valued liabilities	(65)	(188)	(182)	(162)	p
15	Defined benefit pension fund net assets (net of related tax liability)	(293)	(292)	(267)	(270)	l-s
16	Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	(7)	(5)	(3)	(5)	a
17	Reciprocal cross holdings in common equity	-	-	-	-	
18	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	-	-	-	-	
19	Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	-	(907)	(823)	(881)	e
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	-	-	-	(219)	
23	of which: significant investments in the common stock of financials	-	-	-	(145)	f
24	of which: mortgage servicing rights	-	-	-	-	
25	of which: deferred tax assets arising from temporary differences	-	-	-	(74)	j
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI	(4)	(4)	(3)	(4)	o
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	-	-	-	-	
28	<b>Total regulatory adjustments to Common Equity Tier 1</b>	(17,061)	(18,476)	(18,384)	(18,749)	
29	<b>Common Equity Tier 1 capital (CET1)</b>	47,804	46,578	46,565	46,193	

**CC1 – Composition of regulatory capital**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	b
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation <sup>(1)</sup>
<b>Additional Tier 1 capital: instruments</b>						
30	Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	3,211	3,211	3,211	3,211	z
31	of which: classified as equity under applicable accounting standards	3,211	3,211	3,211	3,211	
32	of which: classified as liabilities under applicable accounting standards	-	-	-	-	
33	Directly issued capital instruments subject to phase out from additional Tier 1	1,306	1,423	1,423	1,960	aa + (2)
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)	118	93	172	345	cc
35	of which: instruments issued by subsidiaries subject to phase out	-	-	-	-	
36	Additional Tier 1 capital before regulatory adjustments	4,635	4,727	4,806	5,516	
<b>Additional Tier 1 capital: regulatory adjustments</b>						
37	Investments in own Additional Tier 1 instruments	(2)	(1)	-	-	
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	-	-	-	-	b
41	Other deductions from Tier 1 capital as determined by OSFI	-	-	-	-	
41a	of which: reverse mortgages	-	-	-	-	
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	-	-	-	-	
43	<b>Total regulatory adjustments to Additional Tier 1 capital</b>	(2)	(1)	-	-	
44	<b>Additional Tier 1 capital (AT1)</b>	4,633	4,726	4,806	5,516	
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	52,437	51,304	51,371	51,709	

**CC1 – Composition of regulatory capital**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	b
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation <sup>(1)</sup>
<b>Tier 2 capital: instruments and provisions</b>						
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	6,930	6,887	6,904	5,431	<i>m</i>
47	<i>Directly issued capital instruments subject to phase out from Tier 2</i>	365	365	2,117	2,123	
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)	87	96	95	93	<i>dd</i>
49	<i>of which: instruments issued by subsidiaries subject to phase out</i>	-	-	-	-	
50	General allowances	1,573	1,200	1,305	1,517	<i>c+d</i>
51	<b>Tier 2 capital before regulatory adjustments</b>	8,955	8,548	10,421	9,164	
<b>Tier 2 capital: regulatory adjustments</b>						
52	Investments in own Tier 2 instruments	-	(2)	(246)	(18)	<i>ff</i>
53	Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments	-	-	-	-	
54	Non-significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation, where the institution does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	-	-	-	-	
54a	Non-significant investments in the other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs, where the institution does not own more than 10% of the issued common share capital of the entity: amount previously designated for the 5% threshold but that no longer meets the conditions.	-	-	-	-	
55	Significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation.	-	-	-	-	
56	Other deductions from Tier 2 capital	-	-	-	-	
57	<b>Total regulatory adjustments to Tier 2 capital</b>	-	(2)	(246)	(18)	
58	<b>Tier 2 capital (T2)</b>	8,955	8,546	10,175	9,146	
59	<b>Total capital (TC = T1 + T2)</b>	61,392	59,850	61,546	60,855	
60	<b>Total risk-weighted assets</b>	420,694	421,185	417,058	415,212	
60a	<b>Common Equity Tier 1 (CET1) Capital RWA</b>	420,694	421,185	417,058	415,212	
60b	<b>Tier 1 Capital RWA</b>	420,694	421,185	417,058	415,212	
60c	<b>Total Capital RWA</b>	420,694	421,185	417,058	415,212	



**CC1 – Composition of regulatory capital**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	b
		Q1 2020	Q4 2019	Q3 2019	Q2 2019	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation <sup>(1)</sup>
<b>Capital ratios</b>						
61	Common Equity Tier 1 (as a percentage of risk-weighted assets)	11.4%	11.1%	11.2%	11.1%	
62	Tier 1 (as a percentage of risk-weighted assets)	12.5%	12.2%	12.3%	12.5%	
63	Total capital (as a percentage of risk-weighted assets)	14.6%	14.2%	14.8%	14.7%	
64	Buffer (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer plus D-SIB buffer expressed as a percentage of risk-weighted assets)	8.0%	8.0%	8.0%	8.0%	
65	of which: capital conservation buffer	2.5%	2.5%	2.5%	2.5%	
66	of which: bank-specific countercyclical buffer	0.0%	0.0%	0.0%	0.0%	
67	of which: G-SIB buffer	0.0%	0.0%	0.0%	0.0%	
67a	of which: D-SIB buffer	1.0%	1.0%	1.0%	1.0%	
68	Common Equity Tier 1 available to meet buffers (as percentage of risk-weighted assets)	11.4%	11.1%	11.2%	11.1%	
<b>OSFI target (minimum + capital conservation buffer + D-SIB buffer (if applicable))<sup>(3)</sup></b>						
69	Common Equity Tier 1 target ratio	8.0%	8.0%	8.0%	8.0%	
70	Tier 1 capital target ratio	9.5%	9.5%	9.5%	9.5%	
71	Total capital target ratio	11.5%	11.5%	11.5%	11.5%	
<b>Amounts below the thresholds for deduction (before risk weighting)</b>						
72	Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities	1,854	1,022	920	944	
73	Significant investments in the common stock of financial entities	2,514	4,749	4,739	4,584	
74	Mortgage servicing rights (net of related tax liability)	-	-	-	-	
75	Deferred tax assets arising from temporary differences (net of related tax liability)	2,238	2,104	2,204	2,345	
<b>Applicable caps on the inclusion of allowances in Tier 2</b>						
76	Allowances eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)	1,162	1,192	1,265	1,358	
77	Cap on inclusion of allowances in Tier 2 under standardized approach	1,545	1,604	1,655	1,729	
78	Allowances eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	411	8	40	159	
79	Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	1,446	1,423	1,381	1,340	
<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)</b>						
80	Current cap on CET1 instruments subject to phase out arrangements	20%	30%	30%	30%	
81	Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	-	-	-	
82	Current cap on AT1 instruments subject to phase out arrangements	20%	30%	30%	30%	
83	Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)	117	-	-	113	
84	Current cap on T2 instruments subject to phase out arrangements	20%	30%	30%	30%	
85	Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	-	-	-	

(1) Cross-referenced to the Consolidated Balance Sheet: Source of Definition of Capital Components on CC2 (refer to column: Under Regulatory Scope of Consolidation).

(2) Line 33 also includes \$750 million (\$750 million as at October 31, 2019, \$750 million as at July 31, 2019 and \$1,400 million as at April 30, 2019) of capital instruments issued by trusts not consolidated under accounting standard IFRS 10, effective Q1 2014.

(3) Reflects Pillar 1 targets and does not include Pillar 2 domestic stability buffer of 2.0% (as at Jan 2020).

**CC2 – Reconciliation of regulatory capital to balance sheet**


Condensed balance sheet (in \$MM)	a	b	c
	Balance sheet as in published financial statements <sup>(1)</sup>	Under regulatory scope of consolidation <sup>(2)</sup>	Cross-reference to Definition of Capital Components
	Q1 2020	Q1 2020	
<b>Assets</b>			
Cash and deposits with financial institutions	69,291	69,202	
Precious metals	3,616	3,616	
<b>Trading assets</b>			
Securities	128,071	128,064	
- <i>Investment in own shares</i>		7	<i>a</i>
- <i>Other trading securities</i>		128,057	
Loans	15,815	15,815	
Other	845	845	
	144,731	144,724	
Financial instruments designated at fair value through profit and loss	-	-	
Securities purchased under resale agreements and securities borrowed	146,432	146,432	
Derivative financial instruments	43,083	43,083	
Investment securities	78,003	76,896	
- <i>Significant investments in Additional Tier 1 capital and other financial institutions reflected in regulatory capital</i>		-	<i>b</i>
- <i>Other securities</i>		76,896	
<b>Loans</b>			
Residential mortgages	268,670	268,566	
Personal loans	96,703	96,692	
Credit cards	17,715	17,715	
Business and government	214,212	214,207	
	597,300	597,180	
Allowance for credit losses	5,021	5,020	
- <i>General Allowance reflected in Tier 2 capital</i>		1,162	<i>c</i>
- <i>Shortfall of allowances to expected loss</i>		-	<i>ee</i>
- <i>Excess of allowances to expected loss</i>		411	<i>d</i>
- <i>Allowances not reflected in regulatory capital</i>		3,447	

**CC2 – Reconciliation of regulatory capital to balance sheet**


Condensed balance sheet (in \$MM)	a	b	c
	Balance sheet as in published financial statements <sup>(1)</sup>	Under regulatory scope of consolidation <sup>(2)</sup>	Cross-reference to Definition of Capital Components
	Q1 2020	Q1 2020	
<b>Other</b>			
Customers' liability under acceptances, net of allowance	21,364	21,364	
Property and equipment	6,103	6,101	
Investments in associates	2,327	2,623	
- Significant Investments in other financial institutions including deconsolidated subsidiaries exceeding 10% regulatory thresholds		-	e
- Significant Investments in other financial institutions including deconsolidated subsidiaries exceeding 15% regulatory thresholds		-	f
- Significant Investments in other financial institutions including deconsolidated subsidiaries within regulatory thresholds		2,623	
Goodwill and other intangible assets	17,191	17,516	
- Goodwill		9,397	g
- Imputed goodwill for Significant Investments		326	g
- Intangibles (excl computer software)		5,407	h
- Computer software intangibles		2,386	i
Deferred tax assets	1,718	1,717	
- Deferred tax assets arising from temporary differences exceeding the regulatory threshold		-	j
- Deferred tax assets that rely on future profitability		271	k
- Deferred tax assets not deducted from regulatory capital		1,446	
Other Assets	27,884	25,458	
- Defined pension fund assets		442	l
- Other assets		25,016	
Total other	76,587	74,779	
<b>Total assets</b>	<b>1,154,022</b>	<b>1,150,892</b>	

**CC2 – Reconciliation of regulatory capital to balance sheet**


Condensed balance sheet (in \$MM)	a	b	c
	Balance sheet as in published financial statements <sup>(1)</sup>	Under regulatory scope of consolidation <sup>(2)</sup>	Cross-reference to Definition of Capital Components
	Q1 2020	Q1 2020	
<b>Liabilities</b>			
<b>Deposits</b>			
Personal	223,881	223,881	
Business and government	488,658	488,658	
- <i>Investment in own Tier 2 instruments</i>		-	<i>ff</i>
- <i>Other deposits from Business and government</i>		488,658	
Financial institutions	51,311	51,311	
	763,850	763,850	
Financial instruments designated at fair value through profit and loss	12,994	12,994	
<b>Other</b>			
Acceptances	21,389	21,389	
Obligations related to securities sold short	32,439	32,439	
Derivative financial instruments	43,139	43,139	
Obligations related to securities sold under repurchase agreements and securities lent	143,019	143,019	
Subordinated debentures	7,295	7,295	
- <i>Regulatory capital amortization of maturing debentures</i>		-	
- <i>Subordinated debentures used for regulatory capital</i>		-	
- <i>of which: are included in Tier 2 capital</i>		6,930	<i>m</i>
- <i>of which: are subject to phase out included in Tier 1 capital (20%)</i>		365	
- <i>of which: are subject to phase out not included in Tier 1 capital</i>		-	
Other liabilities	60,036	56,906	
- <i>Liquidity reserves</i>		4	<i>o</i>
- <i>Gains/losses due to changes in own credit risk including DVA on derivatives</i>		65	<i>p</i>
- <i>Deferred tax liabilities</i>		1,316	
- <i>Intangible assets (excl. computer software and mortgage servicing rights)</i>		1,480	<i>q</i>
- <i>Intangible assets - computer software</i>		340	<i>r</i>
- <i>Defined benefit pension fund assets</i>		149	<i>s</i>
- <i>Other deferred tax liabilities</i>		(653)	
- <i>Other liabilities</i>		55,521	
Total other	307,317	304,187	
<b>Total liabilities</b>	<b>1,084,161</b>	<b>1,081,031</b>	

**CC2 – Reconciliation of regulatory capital to balance sheet**


Condensed balance sheet (in \$MM)	a	b	c
	Balance sheet as in published financial statements <sup>(1)</sup>	Under regulatory scope of consolidation <sup>(2)</sup>	Cross-reference to Definition of Capital Components
	Q1 2020	Q1 2020	
<b>Equity</b>			
Common equity			
Common shares	18,248	18,248	u
- of which: amount eligible for CET1		18,248	
- of which: amount eligible for AT1		-	
Retained earnings	45,418	45,418	v
Accumulated other comprehensive income	(543)	(543)	w
- Cash flow hedging reserve		725	x
- Other		(1,268)	
Other reserves	362	362	
- portion allowed for inclusion into CET1		44	y
- portion not allowed for regulatory capital		318	
Total common equity	63,485	63,485	
Preferred shares and other equity instruments	3,884	3,884	
- of which: are qualifying Tier 1 capital		3,211	z
- of which: are subject to phase out and included in Tier 1 capital (20%)		556	aa
- of which: are subject to phase out and not included into Tier 1 capital		117	
Total equity attributable to equity holders of the Bank	67,369	67,369	
Non-controlling interests in subsidiaries	2,492	2,492	
- portion allowed for inclusion into CET1		1,698	bb
- portion allowed for inclusion into Tier 1 capital		118	cc
- portion allowed for inclusion into Tier 2 capital		87	dd
- portion not allowed for regulatory capital		589	
Total equity	69,861	69,861	
<b>Total liabilities and equity</b>	<b>1,154,022</b>	<b>1,150,892</b>	

(1) Consolidated Statement of Financial Position as reported in the First Quarter 2020 Shareholders' Report.

(2) Legal Entities that are within the accounting scope of consolidation but excluded from the regulatory scope of consolidation represent the Bank's insurance subsidiaries whose principle activities include insurance, reinsurance, property and casualty insurance. Key subsidiaries are Scotia Insurance Barbados Ltd (assets: \$246MM, equity: \$238MM), Scotia Life Insurance Company (assets: \$6MM, equity: \$20MM), Scotia Reinsurance Limited (assets: \$25MM, equity: \$83MM), Scotia Jamaica Life Insurance Co. Ltd (assets: \$530MM, equity: \$86MM), Scotia Life Trinidad and Tobago Ltd (assets: \$409MM, equity: \$69MM), Scotia Insurance Caribbean Ltd. (assets: \$1MM, equity: \$17MM), Scotia Seguros de Vida SA (assets: \$197MM, equity: \$76MM), and MD Life Insurance Company (assets: \$2,298MM, equity: \$14MM).

**TLAC1: TLAC composition for G-SIBs (at resolution group level)**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020 Amounts	Q4 2019 Amounts	Q3 2019 Amounts	Q2 2019 Amounts
<b>Regulatory capital elements of TLAC and adjustments</b>					
1	Common Equity Tier 1 capital (CET1)	47,804	46,578	46,565	46,193
2	Additional Tier 1 capital (AT1) before TLAC adjustments	4,633	4,725	4,806	5,516
3	AT1 ineligible as TLAC as issued out of subsidiaries to third parties	-	-	-	-
4	Other adjustments	-	-	-	-
5	AT1 instruments eligible under the TLAC framework	4,633	4,725	4,806	5,516
6	Tier 2 capital (T2) before TLAC adjustments	8,955	8,549	10,421	9,164
7	Amortized portion of T2 instruments where remaining maturity > 1 year	-	-	-	-
8	T2 capital ineligible as TLAC as issued out of subsidiaries to third parties	-	-	-	-
9	Other adjustments	-	(2)	(246)	(18)
10	T2 instruments eligible under the TLAC framework	8,955	8,547	10,175	9,146
11	TLAC arising from regulatory capital	61,392	59,850	61,546	60,855
<b>Non-regulatory capital elements of TLAC</b>					
12	External TLAC instruments issued directly by the bank and subordinated to excluded liabilities	-	-	-	-
13	External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements.	17,578	10,905	7,015	4,801
14	Of which: amount eligible as TLAC after application of the caps	N/A	N/A	N/A	N/A
15	External TLAC instruments issued by funding vehicles prior to 1 January 2022	-	-	-	-
16	Eligible ex ante commitments to recapitalize a G-SIB in resolution	N/A	N/A	N/A	N/A
17	TLAC arising from non-regulatory capital instruments before adjustments	17,578	10,905	7,015	4,801
<b>Non-regulatory capital elements of TLAC: adjustments</b>					
18	TLAC before deductions	78,970	70,755	68,561	65,656
19	Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs)	N/A	N/A	N/A	N/A
20	Deduction of investments in own other TLAC liabilities	(135)	(20)	-	-
21	Other adjustments to TLAC	-	-	-	-
22	TLAC after deductions	78,835	70,735	68,561	65,656
<b>Risk-weighted assets and leverage exposure measure for TLAC purposes</b>					
23	Total risk-weighted assets adjusted as permitted under the TLAC regime	420,694	421,185	417,058	415,212
24	Leverage exposure measure	1,300,001	1,230,648	1,211,612	1,204,111
<b>TLAC ratios and buffers</b>					
25	TLAC (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	18.7%	16.8%	16.4%	15.8%
26	TLAC (as a percentage of leverage exposure)	6.1%	5.7%	5.7%	5.5%
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
28	Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer requirements plus higher loss absorbency requirement, expressed as a percentage of risk-weighted assets)	3.5%	3.5%	3.5%	3.5%
29	Of which: capital conservation buffer requirement	2.5%	2.5%	2.5%	2.5%
30	Of which: bank specific countercyclical buffer requirement	0.0%	0.0%	0.0%	0.0%
31	Of which: D-SIB / G-SIB buffer	1.0%	1.0%	1.0%	1.0%

Rows 14, 16, 19 and 27 are not applicable to Canadian D-SIBs.

**TLAC3 – Resolution entity – creditor ranking at legal entity level**


(in \$MM)		Creditor ranking						Sum of 1 to 6
		1 (most junior)	2	3	4	5	6 (most senior)	
<b>Q1 2020</b>								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 Instruments Stated value	Subordinated Debt Par value	Bail-in Debt <sup>(1)</sup> Par value	Other Liabilities <sup>(2)</sup>	Total
2	Total capital and liabilities net of credit risk mitigation	18,248	2,324	1,560	7,254	19,074	-	48,460
3	Subset of row 2 that are excluded liabilities	7	119	-	-	135	-	261
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,241	2,205	1,560	7,254	18,939	-	48,199
5	Subset of row 4 that are <i>potentially</i> eligible as TLAC	18,241	2,205	1,560	7,254	17,596	-	46,856
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	74	-	74
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	-	10,219	-	10,219
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	7,144	6,407	-	13,551
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	110	896	-	1,006
10	Subset of row 5 that is perpetual securities	18,241	2,205	1,560	-	-	-	22,006

<b>Q4 2019</b>								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 Instruments Stated value	Subordinated Debt Par value	Bail-in Debt <sup>(1)</sup> Par value	Other Liabilities <sup>(2)</sup>	Total
2	Total capital and liabilities net of credit risk mitigation	18,264	2,324	1,560	7,231	11,122	-	40,501
3	Subset of row 2 that are excluded liabilities	5	1	-	2	20	-	28
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,259	2,323	1,560	7,229	11,102	-	40,473
5	Subset of row 4 that are potentially eligible as TLAC	18,259	2,323	1,560	7,229	11,009	-	40,380
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	1,281	-	1,281
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	-	6,645	-	6,645
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	7,120	2,886	-	10,006
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	109	197	-	306
10	Subset of row 5 that is perpetual securities	18,259	2,323	1,560	-	-	-	22,142



(in \$MM)		Creditor ranking						Sum of 1 to 6
		1 (most junior)	2	3	4	5	6 (most senior)	
<b>Q3 2019</b>								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 Instruments Stated value	Subordinated Debt Par value	Bail-in Debt <sup>(1)</sup> Par value	Other Liabilities <sup>(2)</sup>	Total
2	Total capital and liabilities net of credit risk mitigation	18,295	2,323	1,561	9,009	7,165	-	38,353
3	Subset of row 2 that are excluded liabilities	3	-	-	243	19	-	265
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,292	2,323	1,561	8,766	7,146	-	38,088
5	Subset of row 4 that are potentially eligible as TLAC	18,292	2,323	1,561	8,766	7,053	-	37,995
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	1,278	-	1,278
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	-	3,815	-	3,815
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	8,656	1,800	-	10,456
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	110	160	-	270
10	Subset of row 5 that is perpetual securities	18,292	2,323	1,561	-	-	-	22,176

<b>Q2 2019</b>								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 Instruments Stated value	Subordinated Debt Par value	Bail-in Debt <sup>(1)</sup> Par value	Other Liabilities <sup>(2)</sup>	Total
2	Total capital and liabilities net of credit risk mitigation	18,284	2,324	1,561	7,540	4,883	-	34,592
3	Subset of row 2 that are excluded liabilities	5	113	-	18	-	-	136
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,279	2,211	1,561	7,522	4,883	-	34,456
5	Subset of row 4 that are potentially eligible as TLAC	18,279	2,211	1,561	7,522	4,823	-	34,396
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	1,340	-	1,340
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	-	1,715	-	1,715
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	7,407	1,647	-	9,054
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	115	121	-	236
10	Subset of row 5 that is perpetual securities	18,279	2,211	1,561	-	-	-	22,051

(1) Under the Bank Recapitalization (Bail-In) Regime. Please refer to the Basel III Implementation section for a description of the requirements.

(2) Disclosure not currently required by OSFI.

**LR1 – Summary comparison of accounting assets vs leverage ratio exposure measure**


(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
1	Total consolidated assets as per published financial statements	1,154,022	1,086,161	1,066,740	1,058,169
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(3,130)	(3,686)	(3,379)	(3,266)
3	Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference	(3,478)	(3,336)	(3,336)	-
4	Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	-	-	-	-
5	Adjustments for derivative financial instruments	13,604	15,341	16,272	15,532
6	Adjustment for securities financing transactions (i.e. repos and similar secured lending)	10,589	10,282	12,892	10,735
7	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	145,393	144,174	140,625	141,528
8	Other adjustments <sup>(1)</sup>	(16,999)	(18,288)	(18,202)	(18,587)
9	<b>Leverage ratio exposure measure</b>	<b>1,300,001</b>	<b>1,230,648</b>	<b>1,211,612</b>	<b>1,204,111</b>

(1) Includes asset amounts deducted in determining Basel III Tier 1 capital.

(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
<b>On-balance sheet exposures <sup>(1)</sup></b>					
1	On-balance sheet exposures (excluding derivatives and securities financing transactions (SFTs), but including collateral)	957,900	909,841	904,390	897,456
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	-	-	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(6,842)	(5,013)	(3,830)	(3,612)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	(16,999)	(18,288)	(18,202)	(18,587)
5	<b>Total on-balance sheet exposures</b> (excluding derivatives and SFTs) (sum of rows 1 to 4)	<b>934,059</b>	<b>886,540</b>	<b>882,358</b>	<b>875,257</b>
<b>Derivative exposures</b>					
6	Replacement cost associated with <i>all</i> derivatives transactions (where applicable net of eligible cash variation margin and/or with bilateral netting)	32,791	27,716	14,736	11,298
7	Add-on amounts for PFE associated with <i>all</i> derivatives transactions	27,928	28,651	38,116	37,200
8	(Exempted CCP leg of client-cleared trade exposures)	-	-	-	-
9	Adjusted effective notional amount of written credit derivatives	4,354	3,681	5,342	4,753
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(1,545)	(1,574)	(1,935)	(2,750)
11	<b>Total derivative exposures (sum of rows 6 to 10)</b>	<b>63,528</b>	<b>58,474</b>	<b>56,259</b>	<b>50,501</b>
<b>Securities financing transaction exposures</b>					
12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	158,864	139,571	129,326	132,082
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(12,432)	(8,393)	(9,848)	(5,992)
14	CCR exposure for SFT assets	10,589	10,282	12,892	10,735
15	Agent transaction exposures	-	-	-	-
16	<b>Total securities financing transaction exposures (sum of rows 12 to 15)</b>	<b>157,021</b>	<b>141,460</b>	<b>132,370</b>	<b>136,825</b>
<b>Other off-balance sheet exposures</b>					
17	Off-balance sheet exposure at gross notional amount	474,224	463,282	454,208	449,556
18	(Adjustments for conversion to credit equivalent amounts)	(328,831)	(319,108)	(313,583)	(308,028)
19	<b>Off-balance sheet items (sum of rows 17 and 18)</b>	<b>145,393</b>	<b>144,174</b>	<b>140,625</b>	<b>141,528</b>
<b>Capital and total exposures</b>					
20	Tier 1 capital	52,437	51,304	51,371	51,709
21	<b>Total exposures (sum of rows 5, 11, 16 and 19)</b>	<b>1,300,001</b>	<b>1,230,648</b>	<b>1,211,612</b>	<b>1,204,111</b>
<b>Leverage ratio</b>					
22	Basel III leverage ratio	4.0%	4.2%	4.2%	4.3%

(1) On-balance sheet items exclude securities purchased under resale agreements and securities borrowed (\$146,432MM), derivative financial instruments (\$43,083MM), assets outside the regulatory scope of consolidation (\$3,130MM).

**CR1: Credit quality of assets <sup>(1)</sup>**


(in \$MM)		a	b	c	d	e	f	g
		Gross carrying values of <sup>(2)</sup>		Allowances/ impairments <sup>(4)</sup>	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)
		Defaulted exposures <sup>(3)</sup>	Non-defaulted exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General		
<b>Q1 2020</b>								
1	Loans <sup>(5)</sup>	4,663	681,433	4,914	1,224	2,400	1,290	681,182
2	Debt Securities	220	72,928	-	-	-	-	73,148
3	Off-balance sheet exposures <sup>(6)</sup>	395	233,182	51	5	7	39	233,526
4	<b>Total</b>	<b>5,278</b>	<b>987,543</b>	<b>4,965</b>	<b>1,229</b>	<b>2,407</b>	<b>1,329</b>	<b>987,856</b>
<b>Q4 2019</b>								
1	Loans <sup>(5)</sup>	4,902	650,047	4,934	1,291	2,418	1,225	650,015
2	Debt Securities	218	78,048	1	-	-	1	78,265
3	Off-balance sheet exposures <sup>(6)</sup>	612	231,712	55	6	18	31	232,269
4	<b>Total</b>	<b>5,732</b>	<b>959,807</b>	<b>4,990</b>	<b>1,297</b>	<b>2,436</b>	<b>1,257</b>	<b>960,549</b>
<b>Q3 2019</b>								
1	Loans <sup>(5)</sup>	5,066	642,012	5,070				642,008
2	Debt Securities	219	78,572	-				78,791
3	Off-balance sheet exposures <sup>(6)</sup>	661	225,715	61				226,315
4	<b>Total</b>	<b>5,946</b>	<b>946,299</b>	<b>5,131</b>				<b>947,114</b>
<b>Q2 2019</b>								
1	Loans <sup>(5)</sup>	5,211	638,136	5,162				638,185
2	Debt Securities	235	81,499	1				81,733
3	Off-balance sheet exposures <sup>(6)</sup>	865	230,498	63				231,300
4	<b>Total</b>	<b>6,311</b>	<b>950,133</b>	<b>5,226</b>				<b>951,218</b>

(1) As required by OSFI, commencing Q4 2019, this table incorporates the BCBS Technical Amendments to Pillar 3 disclosure requirements - regulatory treatment of accounting provisions (August 2018).

Consistent with the requirements for regulatory capital reporting and in accordance with OSFI Capital Adequacy Requirements (Chapter 2), General Allowances are defined as Stage 1 and Stage 2 allowances under IFRS 9 and Specific Allowances are defined as Stage 3 allowances under IFRS 9.

(2) The accounting value of on- and off-balance sheet exposures before any credit conversion factor (CCF) or credit risk mitigation (CRM), but after considering write-offs.

(3) Defaulted exposures include: (i) the Bank's reported Gross Impaired Loans, (ii) credit cards which meet the regulatory definition of default, and (iii) off-balance sheet commitments, LCs and/or LGs which meet the regulatory definition of default.

(4) Includes all three ECL Stages, net of allowances related to securitizations of bank originated credit card receivables and ECL related to entities outside the scope of regulatory consolidation.

(5) Includes bankers acceptances and deposits with banks.

(6) Excludes all revocable loan commitments.

## CR2: Changes in stock of defaulted loans and debt securities<sup>(1)</sup>



(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
1	Defaulted loans and debt securities - Beginning of Quarter <sup>(2)</sup>	5,732	5,946	6,311	6,321
2	Loans and debt securities that have defaulted since the last reporting period	1,166	1,048	1,051	996
3	Returned to non-defaulted status <sup>(3)</sup>	(198)	(70)	(190)	(135)
4	Amounts written off	(963)	(886)	(890)	(863)
5	Other changes <sup>(4)</sup>	(459)	(306)	(336)	(8)
6	Defaulted loans and debt securities - End of Quarter <sup>(2)</sup>	5,278	5,732	5,946	6,311

(1) Defaulted exposures include: (i) the Bank's reported Gross Impaired Loans, (ii) credit cards which meet the regulatory definition of default, and (iii) off-balance sheet commitments, LCs and/or LGs which meet the regulatory definition of default.

(2) Regulatory Definition of Default: when there is objective evidence that the Bank no longer has reasonable assurance as to the timely collection of interest and principal, or where a contractual payment is 90 days in arrears (including credit cards), or the customer is declared to be bankrupt.

(3) Includes returned to non-defaulted status and payments on defaulted accounts.

(4) Includes the impact from foreign currency translation and changes in credit cards and off-balance sheet exposures which meet the regulatory definition of default.

## CR3: Credit risk mitigation techniques – overview



(in \$MM)		a	b1	b	d	f
		Unsecured exposures: carrying amount <sup>(1)</sup>	Exposures to be secured <sup>(1)</sup>	Exposures secured by collateral <sup>(2) (3)</sup>	Exposures secured by financial guarantees <sup>(4)</sup>	Exposures secured by credit derivatives
<b>Q1 2020</b>						
1	Loans <sup>(5)</sup>	267,558	413,624	324,174	89,450	-
2	Debt Securities	51,172	21,976	-	21,976	-
3	<b>Total</b>	<b>318,730</b>	<b>435,600</b>	<b>324,174</b>	<b>111,426</b>	<b>-</b>
4	Of which defaulted	1,570	1,778	1,413	365	-

<b>Q4 2019</b>						
1	Loans <sup>(5)</sup>	242,957	407,058	316,253	90,805	-
2	Debt Securities	56,204	22,061	-	22,061	-
3	<b>Total</b>	<b>299,161</b>	<b>429,119</b>	<b>316,253</b>	<b>112,866</b>	<b>-</b>
4	Of which defaulted	1,653	1,872	1,546	326	-

<b>Q3 2019</b>						
1	Loans <sup>(5)</sup>	239,010	402,998	310,556	92,442	-
2	Debt Securities	59,238	19,553	-	19,553	-
3	<b>Total</b>	<b>298,248</b>	<b>422,551</b>	<b>310,556</b>	<b>111,995</b>	<b>-</b>
4	Of which defaulted	1,706	1,910	1,583	327	-

<b>Q2 2019</b>						
1	Loans <sup>(5)</sup>	241,870	396,315	300,529	95,786	-
2	Debt Securities	68,853	12,880	-	12,880	-
3	<b>Total</b>	<b>310,723</b>	<b>409,195</b>	<b>300,529</b>	<b>108,666</b>	<b>-</b>
4	Of which defaulted	1,700	2,073	1,654	419	-

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

(2) Includes non-retail and retail AIRB exposures, where collateral is used within the estimation of LGD.

(3) Includes retail mortgages and real estate secured lines of credit under both AIRB and standardized approaches.

(4) Includes government insured mortgages.

(5) Includes bankers acceptances and deposits with banks.

**CR4: Standardized approach – credit risk exposures and  
Credit Risk Mitigation (CRM) effects**



(in \$MM)		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
Asset classes		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
<b>Q1 2020</b>							
1	Bank	2,550	750	2,550	157	2,577	95%
2	Corporate	52,723	22,930	52,723	6,229	55,663	94%
3	Sovereign	6,383	161	6,383	5	694	11%
4	Real Estate Secured	44,687	27	44,687	-	18,101	41%
5	Other Retail	43,255	34,266	43,255	-	32,157	74%
6	Equity <sup>(1)</sup>	1,942	-	1,942	-	2,058	106%
7	Other Assets <sup>(2)</sup>	68,247	-	68,247	-	14,773	22%
8	<b>Total</b>	<b>219,787</b>	<b>58,134</b>	<b>219,787</b>	<b>6,391</b>	<b>126,023</b>	<b>56%</b>

<b>Q4 2019</b>							
1	Bank	1,998	857	1,998	186	1,714	78%
2	Corporate	52,814	24,968	52,814	6,765	56,868	95%
3	Sovereign	6,749	300	6,749	32	869	13%
4	Real Estate Secured	47,427	38	47,427	-	19,727	42%
5	Other Retail	44,709	26,060	44,709	-	33,196	74%
6	Equity <sup>(1)</sup>	1,517	-	1,517	-	1,608	106%
7	Other Assets <sup>(2)</sup>	60,984	-	60,984	-	11,223	18%
8	<b>Total</b>	<b>216,198</b>	<b>52,223</b>	<b>216,198</b>	<b>6,983</b>	<b>125,205</b>	<b>56%</b>

<b>Q3 2019</b>							
1	Bank	2,198	487	2,198	65	1,811	80%
2	Corporate	53,599	25,421	53,599	6,887	57,862	96%
3	Sovereign	6,937	302	6,937	33	1,554	22%
4	Real Estate Secured	48,322	51	48,322	-	20,454	42%
5	Other Retail	45,325	26,430	45,325	-	33,697	74%
6	Equity <sup>(1)</sup>	1,412	-	1,412	-	1,497	106%
7	Other Assets <sup>(2)</sup>	55,589	-	55,589	-	11,544	21%
8	<b>Total</b>	<b>213,382</b>	<b>52,691</b>	<b>213,382</b>	<b>6,985</b>	<b>128,419</b>	<b>58%</b>

<b>Q2 2019</b>							
1	Bank	2,860	197	2,860	107	2,590	87%
2	Corporate	57,562	28,201	57,562	8,464	63,006	95%
3	Sovereign	5,890	15	5,890	6	1,392	24%
4	Real Estate Secured	48,510	52	48,510	-	20,525	42%
5	Other Retail	45,233	24,719	45,233	-	33,049	73%
6	Equity <sup>(1)</sup>	1,348	-	1,348	-	1,429	106%
7	Other Assets <sup>(2)</sup>	60,422	-	60,422	-	12,365	20%
8	<b>Total</b>	<b>221,825</b>	<b>53,184</b>	<b>221,825</b>	<b>8,577</b>	<b>134,356</b>	<b>58%</b>

(1) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% scalar requirement.

(2) Exposures to CCP and risk-weighted threshold deductions are excluded.



**CR5: Standardized approach – exposures by asset classes and risk weights**


(in \$MM)	Risk weight Asset classes	a	b	c	d	e	f	g	h	i	j
		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount (post-CCF and post-CRM) <sup>(1)</sup>
	Q1 2020										
1	Bank	-	-	157	-	8	-	2,542	-	-	2,707
2	Corporate	2,575	-	941	-	96	-	55,167	173	-	58,952
3	Sovereign	5,022	-	2	-	1,341	-	23	-	-	6,388
4	Real Estate Secured	5,542	-	-	28,986	-	9,236	710	213	-	44,687
5	Other Retail	201	-	484	-	-	42,165	341	64	-	43,255
6	Equity <sup>(2)</sup>	-	-	-	-	-	-	1,942	-	-	1,942
7	Other Assets <sup>(3)</sup>	54,755	-	317	-	-	-	13,042	-	133	68,247
8	Total	68,095	-	1,901	28,986	1,445	51,401	73,767	450	133	226,178

<b>Q4 2019</b>											
1	Bank	-	-	579	-	12	-	1,593	-	-	2,184
2	Corporate	2,598	-	242	-	-	-	56,580	159	-	59,579
3	Sovereign	5,155	-	2	-	1,510	-	114	-	-	6,781
4	Real Estate Secured	5,377	-	-	30,517	-	10,453	826	254	-	47,427
5	Other Retail	222	-	534	-	-	43,576	317	60	-	44,709
6	Equity <sup>(2)</sup>	-	-	-	-	-	-	1,517	-	-	1,517
7	Other Assets <sup>(3)</sup>	50,906	-	454	-	-	-	9,493	-	131	60,984
8	<b>Total</b>	<b>64,258</b>	<b>-</b>	<b>1,811</b>	<b>30,517</b>	<b>1,522</b>	<b>54,029</b>	<b>70,440</b>	<b>473</b>	<b>131</b>	<b>223,181</b>

<b>Q3 2019</b>											
1	Bank	-	-	560	-	11	-	1,692	-	-	2,263
2	Corporate	2,557	-	212	-	69	-	57,374	274	-	60,486
3	Sovereign	3,993	-	-	-	2,847	-	130	-	-	6,970
4	Real Estate Secured	5,375	-	-	30,419	-	11,406	859	263	-	48,322
5	Other Retail	243	-	430	-	-	44,293	292	67	-	45,325
6	Equity <sup>(2)</sup>	-	-	-	-	-	-	1,412	-	-	1,412
7	Other Assets <sup>(3)</sup>	45,509	-	-	-	-	-	9,953	-	127	55,589
8	<b>Total</b>	<b>57,677</b>	<b>-</b>	<b>1,202</b>	<b>30,419</b>	<b>2,927</b>	<b>55,699</b>	<b>71,712</b>	<b>604</b>	<b>127</b>	<b>220,367</b>

<b>Q2 2019</b>											
1	Bank	-	-	465	-	9	-	2,493	-	-	2,967
2	Corporate	2,833	-	312	-	170	-	62,416	295	-	66,026
3	Sovereign	3,217	-	-	-	2,574	-	105	-	-	5,896
4	Real Estate Secured	4,975	-	1,335	29,693	-	11,460	600	447	-	48,510
5	Other Retail	1,340	-	-	-	-	43,522	298	73	-	45,233
6	Equity <sup>(2)</sup>	-	-	-	-	-	-	1,348	-	-	1,348
7	Other Assets <sup>(3)</sup>	49,506	-	-	-	-	-	10,790	-	126	60,422
8	<b>Total</b>	<b>61,871</b>	<b>-</b>	<b>2,112</b>	<b>29,693</b>	<b>2,753</b>	<b>54,982</b>	<b>78,050</b>	<b>815</b>	<b>126</b>	<b>230,402</b>

(1) Exposure amount used for the calculation of capital requirements, including both on- and off-balance sheet amounts, net of allowances (ECL Stage 3) and write-offs. The amounts are after application of credit risk mitigation (CRM) techniques and credit conversion factors (CCF).

(2) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% scalar requirement.

(3) Exposures to CCP and risk-weighted threshold deductions are excluded.

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
<b>Q1 2020</b>													
<b>Retail - insured exposures secured by residential real estate</b>	0.00 to <0.15	29,641	-		76,774	0.00%	199,000	22.94%		337	0.4%	1	
	0.15 to <0.25	26,669	-		1,808	0.23%	126,387	21.58%		186	10.3%	1	
	0.25 to <0.50	-	-		-		-			-		-	
	0.50 to <0.75	687	-		-		3,529			-		-	
	0.75 to <2.50	19,875	-		291	0.93%	87,251	14.80%		55	18.9%	-	
	2.50 to <10.00	759	-		-		3,602			-		-	
	10.00 to <100.00	930	-		-		4,428			-		-	
	100.00 (Default)	312	-		-	100.00%	1,800	105.00%		-		-	
	<b>Sub-total</b>	<b>78,873</b>	<b>-</b>	<b>-</b>	<b>78,873</b>	<b>0.01%</b>	<b>425,997</b>	<b>22.87%</b>		<b>578</b>	<b>0.7%</b>	<b>2</b>	<b>15</b>
<b>Retail - uninsured exposures secured by residential real estate</b>	0.00 to <0.15	48,532	35,949	38%	62,249	0.06%	584,224	19.68%		2,038	3.3%	7	
	0.15 to <0.25	62,686	7,990	33%	65,327	0.22%	371,828	20.82%		6,038	9.2%	29	
	0.25 to <0.50	22	-		22	0.38%	943	55.90%		8	36.4%	-	
	0.50 to <0.75	4,942	1,140	43%	5,432	0.64%	67,814	33.56%		1,794	33.0%	12	
	0.75 to <2.50	43,789	216	47%	43,891	1.24%	149,544	20.62%		13,520	30.8%	113	
	2.50 to <10.00	1,191	53	47%	1,216	6.31%	10,398	24.29%		1,119	92.0%	18	
	10.00 to <100.00	1,002	16	69%	1,013	24.20%	6,998	20.90%		1,176	116.1%	50	
	100.00 (Default)	301	1,094	0%	301	100.00%	21,870	55.52%		1,531	508.6%	52	
	<b>Sub-total</b>	<b>162,465</b>	<b>46,458</b>	<b>37%</b>	<b>179,451</b>	<b>0.77%</b>	<b>1,213,619</b>	<b>20.85%</b>		<b>27,224</b>	<b>15.2%</b>	<b>281</b>	<b>107</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
Retail - qualifying revolving (QRRE)	0.00 to <0.15	909	20,152	62%	13,313	0.04%	949,639	74.48%		320	2.4%	4	
	0.15 to <0.25	512	13,923	61%	9,066	0.18%	1,724,304	75.06%		719	7.9%	13	
	0.25 to <0.50	3,425	5,386	73%	7,330	0.27%	348,419	82.11%		880	12.0%	17	
	0.50 to <0.75	372	345	106%	740	0.63%	23,077	43.56%		91	12.3%	2	
	0.75 to <2.50	5,625	6,250	73%	10,177	1.31%	1,082,553	83.68%		4,183	41.1%	113	
	2.50 to <10.00	3,966	1,140	92%	5,014	5.43%	703,648	86.84%		5,752	114.7%	237	
	10.00 to <100.00	997	42	252%	1,104	27.48%	218,914	84.55%		2,402	217.6%	254	
	100.00 (Default)	133	6,752	0%	133	100.00%	651,126	88.75%		733	551.1%	63	
	<b>Sub-total</b>	<b>15,939</b>	<b>53,990</b>	<b>57%</b>	<b>46,877</b>	<b>1.90%</b>	<b>5,701,680</b>	<b>78.89%</b>		<b>15,080</b>	<b>32.2%</b>	<b>703</b>	<b>624</b>
Other Retail Exposures	0.00 to <0.15	6,454	826	63%	6,974	0.09%	354,013	52.02%		869	12.5%	3	
	0.15 to <0.25	-	4	60%	2	0.18%	23	78.92%		1	50.0%	-	
	0.25 to <0.50	7,272	153	81%	7,395	0.29%	330,213	55.78%		2,255	30.5%	12	
	0.50 to <0.75	1,102	1,886	105%	3,080	0.63%	11,179	43.56%		1,156	37.5%	8	
	0.75 to <2.50	12,474	48	91%	12,519	1.18%	479,468	59.51%		8,415	67.2%	89	
	2.50 to <10.00	3,139	2	98%	3,141	5.00%	131,683	63.61%		3,125	99.5%	98	
	10.00 to <100.00	862	-	222%	862	29.45%	37,544	57.06%		1,242	144.1%	145	
	100.00 (Default)	206	139	0%	206	100.00%	18,066	87.29%		838	406.8%	117	
	<b>Sub-total</b>	<b>31,509</b>	<b>3,058</b>	<b>87%</b>	<b>34,179</b>	<b>2.37%</b>	<b>1,362,189</b>	<b>56.22%</b>		<b>17,901</b>	<b>52.4%</b>	<b>472</b>	<b>306</b>
<b>Total</b>		<b>288,786</b>	<b>103,506</b>	<b>49%</b>	<b>339,380</b>	<b>0.91%</b>	<b>8,703,485</b>	<b>32.90%</b>		<b>60,783</b>	<b>17.9%</b>	<b>1,458</b>	<b>1,052</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
<b>Q4 2019</b>													
<b>Retail - insured exposures secured by residential real estate</b>													
	0.00 to <0.15	30,698	-		79,153	0.00%	205,268	24.19%		362	0.5%	1	
	0.15 to <0.25	27,661	-		1,869	0.24%	130,703	23.45%		210	11.2%	1	
	0.25 to <0.50	689	-		-		3,549			-		-	
	0.50 to <0.75	-	-		-		-			-		-	
	0.75 to <2.50	16,517	-		226	0.93%	73,644	14.84%		42	18.6%	-	
	2.50 to <10.00	4,448	-		-		19,173			-		-	
	10.00 to <100.00	924	-		-		4,448			-		-	
	100.00 (Default)	331	-		20	100.00%	1,866	85.54%		-	0.0%	17	
	<b>Sub-total</b>	<b>81,268</b>	<b>-</b>	<b>-</b>	<b>81,268</b>	<b>0.03%</b>	<b>438,651</b>	<b>24.16%</b>		<b>614</b>	<b>0.8%</b>	<b>19</b>	<b>15</b>
<b>Retail - uninsured exposures secured by residential real estate</b>													
	0.00 to <0.15	47,181	35,076	42%	61,932	0.06%	578,685	20.25%		2,054	3.3%	7	
	0.15 to <0.25	60,493	7,843	38%	63,459	0.22%	366,367	22.01%		6,328	10.0%	31	
	0.25 to <0.50	305	-		305	0.46%	2,026	37.61%		89	29.2%	1	
	0.50 to <0.75	4,742	1,277	50%	5,382	0.66%	68,528	32.24%		1,734	32.2%	11	
	0.75 to <2.50	33,368	239	53%	33,495	0.96%	119,580	22.04%		9,627	28.7%	72	
	2.50 to <10.00	10,138	53	53%	10,166	2.98%	36,395	22.18%		5,808	57.1%	68	
	10.00 to <100.00	1,035	14	92%	1,047	23.56%	7,091	22.25%		1,295	123.7%	54	
	100.00 (Default)	273	1,058	0%	273	100.00%	21,311	71.16%		-	0.0%	194	
	<b>Sub-total</b>	<b>157,535</b>	<b>45,560</b>	<b>41%</b>	<b>176,059</b>	<b>0.77%</b>	<b>1,199,983</b>	<b>21.83%</b>		<b>26,935</b>	<b>15.3%</b>	<b>438</b>	<b>98</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
Retail - qualifying revolving (QRRE)	0.00 to <0.15	968	19,699	57%	12,256	0.04%	936,345	73.77%		294	2.4%	4	
	0.15 to <0.25	551	13,567	64%	9,188	0.18%	1,683,447	70.63%		659	7.2%	11	
	0.25 to <0.50	3,489	5,326	69%	7,181	0.27%	349,340	81.38%		843	11.7%	16	
	0.50 to <0.75	350	362	108%	741	0.63%	22,686	42.77%		90	12.1%	2	
	0.75 to <2.50	5,693	6,218	74%	10,313	1.24%	1,080,022	81.77%		4,008	38.9%	106	
	2.50 to <10.00	3,905	1,181	93%	5,000	5.30%	699,008	85.47%		5,571	111.4%	228	
	10.00 to <100.00	956	52	224%	1,072	27.48%	218,351	82.76%		2,319	216.3%	241	
	100.00 (Default)	134	6,582	0%	134	100.00%	633,108	88.19%		-	0.0%	118	
	<b>Sub-total</b>	<b>16,046</b>	<b>52,987</b>	<b>56%</b>	<b>45,885</b>	<b>1.89%</b>	<b>5,622,307</b>	<b>77.16%</b>		<b>13,784</b>	<b>30.0%</b>	<b>726</b>	<b>564</b>
Other Retail Exposures	0.00 to <0.15	6,791	794	58%	7,252	0.09%	363,435	52.74%		935	12.9%	3	
	0.15 to <0.25	-	4	65%	3	0.18%	23	74.02%		1	33.3%	-	
	0.25 to <0.50	7,849	132	77%	7,951	0.29%	338,915	56.72%		2,479	31.2%	13	
	0.50 to <0.75	1,027	1,758	107%	2,900	0.63%	10,608	42.77%		1,073	37.0%	8	
	0.75 to <2.50	13,082	42	91%	13,120	1.18%	475,252	61.37%		9,100	69.4%	96	
	2.50 to <10.00	2,988	2	92%	2,990	5.07%	122,231	65.30%		3,058	102.3%	97	
	10.00 to <100.00	872	1	164%	873	28.84%	37,041	58.00%		1,275	146.0%	146	
	100.00 (Default)	190	138	0%	190	100.00%	18,211	88.50%		-	0.0%	168	
	<b>Sub-total</b>	<b>32,799</b>	<b>2,871</b>	<b>86%</b>	<b>35,279</b>	<b>2.26%</b>	<b>1,365,716</b>	<b>57.42%</b>		<b>17,921</b>	<b>50.8%</b>	<b>531</b>	<b>303</b>
<b>Total</b>		<b>287,648</b>	<b>101,418</b>	<b>50%</b>	<b>338,491</b>	<b>0.90%</b>	<b>8,626,657</b>	<b>33.60%</b>		<b>59,254</b>	<b>17.5%</b>	<b>1,714</b>	<b>980</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
<b>Q3 2019</b>													
<b>Retail - insured exposures secured by residential real estate</b>													
	0.00 to <0.15	30,998	-		81,133	0.00%	206,533	23.66%		365	0.4%	1	
	0.15 to <0.25	28,506	-		1,923	0.24%	134,851	22.76%		210	10.9%	1	
	0.25 to <0.50	725	-		-		3,735			-		-	
	0.50 to <0.75	-	-		-		-			-		-	
	0.75 to <2.50	17,301	-		270	0.93%	77,267	14.91%		51	18.9%	-	
	2.50 to <10.00	4,483	-		-		19,613			-		-	
	10.00 to <100.00	1,000	-		-		4,808			-		-	
	100.00 (Default)	333	-		20	100.00%	1,824	86.72%		-	0.0%	17	
	<b>Sub-total</b>	<b>83,346</b>	<b>-</b>	<b>-</b>	<b>83,346</b>	<b>0.03%</b>	<b>448,631</b>	<b>23.63%</b>		<b>626</b>	<b>0.8%</b>	<b>19</b>	<b>15</b>
<b>Retail - uninsured exposures secured by residential real estate</b>													
	0.00 to <0.15	45,734	34,696	42%	60,308	0.06%	573,381	19.89%		1,970	3.3%	7	
	0.15 to <0.25	57,866	7,735	38%	60,804	0.22%	361,633	21.36%		5,850	9.6%	28	
	0.25 to <0.50	325	-		325	0.46%	1,978	37.31%		93	28.6%	1	
	0.50 to <0.75	4,785	1,173	49%	5,365	0.66%	68,113	32.73%		1,756	32.7%	12	
	0.75 to <2.50	32,451	242	54%	32,581	0.96%	116,919	21.05%		8,952	27.5%	67	
	2.50 to <10.00	9,036	49	57%	9,063	3.01%	33,377	21.28%		5,003	55.2%	59	
	10.00 to <100.00	1,053	17	79%	1,067	23.87%	7,257	21.60%		1,281	120.1%	54	
	100.00 (Default)	275	1,015	0%	275	100.00%	20,567	71.14%		-	0.0%	196	
	<b>Sub-total</b>	<b>151,525</b>	<b>44,927</b>	<b>41%</b>	<b>169,788</b>	<b>0.78%</b>	<b>1,183,225</b>	<b>21.25%</b>		<b>24,905</b>	<b>14.7%</b>	<b>424</b>	<b>95</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Retail**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF <sup>(1)</sup>	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(1)(6)(9)</sup>	j RWA Density <sup>(7)</sup>	k EL <sup>(1)</sup>	l Provisions <sup>(8)</sup>
Retail - qualifying revolving (QRRE)	0.00 to <0.15	955	19,254	57%	12,002	0.04%	918,694	73.70%		288	2.4%	4	
	0.15 to <0.25	558	13,338	63%	9,019	0.18%	1,670,147	70.70%		648	7.2%	11	
	0.25 to <0.50	3,483	5,248	69%	7,117	0.27%	346,673	81.40%		836	11.7%	16	
	0.50 to <0.75	343	332	108%	703	0.63%	21,562	42.77%		85	12.1%	2	
	0.75 to <2.50	5,708	6,101	74%	10,212	1.25%	1,063,325	81.90%		3,984	39.0%	106	
	2.50 to <10.00	3,900	1,138	93%	4,963	5.33%	689,898	85.66%		5,557	112.0%	227	
	10.00 to <100.00	921	45	240%	1,028	27.92%	206,130	82.78%		2,211	215.1%	235	
	100.00 (Default)	126	6,331	0%	126	100.00%	607,171	90.62%		-	0.0%	114	
	<b>Sub-total</b>	<b>15,994</b>	<b>51,787</b>	<b>56%</b>	<b>45,170</b>	<b>1.88%</b>	<b>5,523,600</b>	<b>77.25%</b>		<b>13,609</b>	<b>30.1%</b>	<b>715</b>	<b>587</b>
Other Retail Exposures	0.00 to <0.15	6,683	772	58%	7,129	0.09%	363,368	52.60%		919	12.9%	3	
	0.15 to <0.25	-	3	61%	2	0.18%	22	74.89%		1	50.0%	-	
	0.25 to <0.50	7,549	117	78%	7,639	0.29%	332,765	56.65%		2,379	31.1%	13	
	0.50 to <0.75	944	1,608	107%	2,658	0.63%	9,773	42.77%		983	37.0%	7	
	0.75 to <2.50	12,693	44	91%	12,733	1.19%	472,208	61.05%		8,792	69.0%	93	
	2.50 to <10.00	3,019	1	102%	3,021	5.09%	125,068	65.20%		3,085	102.1%	98	
	10.00 to <100.00	906	1	163%	908	29.52%	38,912	58.19%		1,334	146.9%	156	
	100.00 (Default)	177	136	0%	177	100.00%	18,811	89.88%		-	0.0%	159	
	<b>Sub-total</b>	<b>31,971</b>	<b>2,682</b>	<b>86%</b>	<b>34,267</b>	<b>2.32%</b>	<b>1,360,927</b>	<b>57.33%</b>		<b>17,493</b>	<b>51.0%</b>	<b>529</b>	<b>299</b>
<b>Total</b>		<b>282,836</b>	<b>99,396</b>	<b>50%</b>	<b>332,571</b>	<b>0.90%</b>	<b>8,516,383</b>	<b>33.17%</b>		<b>56,633</b>	<b>17.0%</b>	<b>1,687</b>	<b>996</b>

(1) Includes the retail residential mortgage exposures insured by CMHC, Genworth Canada and Canada Guaranty Insurance.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Number of obligors represents the number of retail accounts.

(4) Post-CRM LGD weighted by post-CRM EAD.

(5) Average maturity is not used in RWA calculation for retail exposures except for the retail residential mortgages where a substitution approach was done to recognize the government guarantee and guarantee of insurance companies.

(6) After application of AIRB scalar of 1.06.

(7) RWA density is calculated as Risk-weighted assets (column i) divided by EAD post-CRM and post-CCF (column d).

(8) Includes all three ECL stages under IFRS 9.

(9) Commencing in Q1 2020, RWA is being calculated on defaulted retail exposures. Previously, the risk impact was reflected in Expected Losses.

**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(6)</sup>	j RWA Density <sup>(7)</sup>	k EL	l Provisions <sup>(8)</sup>
<b>Q1 2020</b>													
<b>Sovereign</b>													
	0.00 to <0.15	108,854	2,101	36%	109,742	0.01%	109	11.03%	1.68	1,286	1.2%	4	
	0.15 to <0.25	3,832	13	12%	3,833	0.20%	4	25.00%	1.78	848	22.1%	2	
	0.25 to <0.50	1,352	518	61%	1,670	0.40%	14	22.96%	1.85	497	29.8%	2	
	0.50 to <0.75	1,909	-	44%	1,909	0.68%	9	18.60%	1.30	577	30.2%	2	
	0.75 to <2.50	988	-	-	988	1.33%	2	17.50%	1.80	403	40.8%	2	
	2.50 to <10.00	210	-	-	210	2.56%	3	6.03%	0.67	30	14.5%	-	
	10.00 to <100.00	379	-	-	379	17.86%	1	3.07%	0.83	59	15.5%	2	
	100.00 (Default)	220	1	100%	221	100.00%	2	25.00%	4.25	2	1.0%	55	
	<b>Sub-total</b>	<b>117,744</b>	<b>2,633</b>	<b>41%</b>	<b>118,952</b>	<b>0.29%</b>	<b>144</b>	<b>11.82%</b>	<b>1.68</b>	<b>3,702</b>	<b>3.1%</b>	<b>69</b>	<b>1</b>
<b>Bank</b>													
	0.00 to <0.15	19,416	10,305	55%	25,320	0.06%	302	27.01%	0.91	2,202	8.7%	5	
	0.15 to <0.25	2,153	408	61%	2,401	0.19%	31	36.04%	1.19	784	32.6%	2	
	0.25 to <0.50	1,835	849	44%	1,964	0.38%	80	38.36%	0.83	838	42.7%	3	
	0.50 to <0.75	1,557	196	41%	1,637	0.54%	24	33.23%	0.66	685	41.8%	2	
	0.75 to <2.50	77	12	27%	81	1.33%	5	36.73%	1.29	64	79.8%	-	
	2.50 to <10.00	15	10	43%	19	4.19%	8	37.26%	1.25	20	105.7%	-	
	10.00 to <100.00	36	36	14%	41	18.41%	6	32.33%	0.32	65	159.5%	2	
	100.00 (Default)	11	3	50%	9	100.00%	5	38.57%	2.08	1	11.7%	4	
	<b>Sub-total</b>	<b>25,100</b>	<b>11,819</b>	<b>54%</b>	<b>31,472</b>	<b>0.17%</b>	<b>461</b>	<b>28.77%</b>	<b>0.92</b>	<b>4,659</b>	<b>14.8%</b>	<b>18</b>	<b>5</b>



**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


		a	b	c	d	e	f	g	h	i	j	k	l
(in \$MM)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post- CCF	Average PD <sup>(2)</sup>	Number of obligors <sup>(3)</sup>	Average LGD <sup>(4)</sup>	Average maturity <sup>(5)</sup>	RWA <sup>(6)</sup>	RWA Density <sup>(7)</sup>	EL	Provisions <sup>(8)</sup>
<b>Corporate - Other <sup>(9)</sup></b>													
	0.00 to <0.15	56,119	117,339	54%	128,161	0.08%	1,920	38.87%	2.16	28,839	22.5%	38	
	0.15 to <0.25	16,527	29,452	49%	28,065	0.17%	1,335	44.40%	2.42	11,666	41.6%	21	
	0.25 to <0.50	52,589	51,867	43%	71,627	0.36%	4,471	48.67%	2.24	46,742	65.3%	129	
	0.50 to <0.75	22,376	15,330	39%	27,195	0.64%	2,632	45.45%	2.06	20,175	74.2%	77	
	0.75 to <2.50	5,216	5,725	43%	6,756	1.33%	697	37.64%	2.20	5,571	82.5%	34	
	2.50 to <10.00	2,282	2,331	47%	3,119	3.74%	388	41.76%	1.93	3,761	120.6%	49	
	10.00 to <100.00	869	343	55%	1,055	27.75%	97	36.32%	1.87	1,980	187.6%	115	
	100.00 (Default)	598	307	68%	550	100.00%	88	43.91%	1.60	1,303	236.8%	191	
	<b>Sub-total</b>	<b>156,576</b>	<b>222,694</b>	<b>49%</b>	<b>266,528</b>	<b>0.61%</b>	<b>11,628</b>	<b>42.76%</b>	<b>2.20</b>	<b>120,037</b>	<b>45.0%</b>	<b>654</b>	<b>357</b>
<b>Corporate – Specialized Lending</b>													
	0.00 to <0.15	3,651	4,609	57%	6,860	0.09%	115	40.67%	2.31	1,667	24.3%	2	
	0.15 to <0.25	3,811	3,500	57%	6,411	0.16%	182	39.81%	1.71	1,957	30.5%	4	
	0.25 to <0.50	11,405	8,382	52%	14,718	0.33%	697	38.40%	1.82	6,663	45.3%	20	
	0.50 to <0.75	921	611	24%	1,023	0.68%	101	42.44%	1.25	652	63.8%	3	
	0.75 to <2.50	42	13	39%	43	1.33%	11	47.79%	1.11	40	94.0%	-	
	2.50 to <10.00	447	32	80%	396	5.85%	9	38.49%	2.96	571	144.3%	8	
	10.00 to <100.00	22	1	49%	22	27.12%	9	40.27%	1.00	49	222.7%	2	
	100.00 (Default)	20	12	80%	30	100.00%	2	40.98%	2.35	153	517.4%	1	
	<b>Sub-total</b>	<b>20,319</b>	<b>17,160</b>	<b>54%</b>	<b>29,503</b>	<b>0.44%</b>	<b>1,126</b>	<b>39.39%</b>	<b>1.90</b>	<b>11,752</b>	<b>39.8%</b>	<b>40</b>	<b>17</b>
<b>Total</b>		<b>319,739</b>	<b>254,306</b>	<b>50%</b>	<b>446,455</b>	<b>0.48%</b>	<b>13,359</b>	<b>37.15%</b>	<b>1.95</b>	<b>140,150</b>	<b>31.4%</b>	<b>781</b>	<b>380</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(6)</sup>	j RWA Density <sup>(7)</sup>	k EL	l Provisions <sup>(8)</sup>
<b>Q4 2019</b>													
<b>Sovereign</b>													
	0.00 to <0.15	88,952	1,940	37%	89,813	0.02%	103	13.42%	2.09	1,497	1.7%	3	
	0.15 to <0.25	3,799	112	10%	3,810	0.20%	3	25.31%	1.96	902	23.7%	2	
	0.25 to <0.50	1,309	443	62%	1,585	0.40%	13	22.65%	1.86	474	29.9%	1	
	0.50 to <0.75	1,614	1	44%	1,614	0.70%	11	19.46%	1.35	511	31.6%	2	
	0.75 to <2.50	1,020	-	0%	1,020	1.39%	2	15.63%	1.80	379	37.1%	2	
	2.50 to <10.00	851	-	-	851	3.31%	5	6.72%	0.70	177	20.8%	3	
	10.00 to <100.00	427	-	-	427	18.48%	1	3.06%	0.08	64	15.1%	2	
	100.00 (Default)	219	1	100%	220	100.00%	2	25.00%	4.27	2	1.0%	55	
	<b>Sub-total</b>	<b>98,191</b>	<b>2,497</b>	<b>40%</b>	<b>99,340</b>	<b>0.38%</b>	<b>140</b>	<b>14.07%</b>	<b>2.05</b>	<b>4,006</b>	<b>4.0%</b>	<b>70</b>	<b>2</b>
<b>Bank</b>													
	0.00 to <0.15	14,805	9,366	52%	19,950	0.06%	266	31.69%	0.78	2,262	11.3%	5	
	0.15 to <0.25	1,433	283	61%	1,613	0.19%	26	39.23%	0.47	467	29.0%	1	
	0.25 to <0.50	1,769	1,263	37%	2,007	0.39%	79	41.94%	0.56	897	44.7%	3	
	0.50 to <0.75	1,601	203	40%	1,681	0.56%	24	43.45%	0.54	1,052	62.5%	4	
	0.75 to <2.50	53	10	29%	55	1.39%	4	45.00%	1.60	54	97.0%	-	
	2.50 to <10.00	14	1	31%	14	2.68%	7	44.48%	1.58	16	118.4%	-	
	10.00 to <100.00	52	24	15%	56	20.20%	5	35.30%	0.79	101	181.3%	4	
	100.00 (Default)	47	3	50%	45	100.00%	6	44.61%	1.24	49	109.9%	12	
	<b>Sub-total</b>	<b>19,774</b>	<b>11,153</b>	<b>50%</b>	<b>25,421</b>	<b>0.36%</b>	<b>417</b>	<b>33.82%</b>	<b>0.73</b>	<b>4,898</b>	<b>19.3%</b>	<b>29</b>	<b>12</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


		a	b	c	d	e	f	g	h	i	j	k	l
(in \$MM)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post- CCF	Average PD <sup>(2)</sup>	Number of obligors <sup>(3)</sup>	Average LGD <sup>(4)</sup>	Average maturity <sup>(5)</sup>	RWA <sup>(6)</sup>	RWA Density <sup>(7)</sup>	EL	Provisions <sup>(8)</sup>
<b>Corporate - Other <sup>(9)</sup></b>													
	0.00 to <0.15	56,668	113,407	54%	126,399	0.08%	1,951	38.99%	2.12	27,947	22.1%	38	
	0.15 to <0.25	15,107	31,422	48%	27,267	0.17%	1,387	44.76%	2.44	11,478	42.1%	21	
	0.25 to <0.50	52,634	50,070	43%	70,195	0.37%	4,395	49.60%	2.22	46,824	66.7%	131	
	0.50 to <0.75	20,082	15,600	39%	24,936	0.66%	2,460	46.19%	2.13	19,347	77.6%	75	
	0.75 to <2.50	5,476	4,796	41%	7,053	1.39%	681	37.96%	2.29	6,027	85.5%	37	
	2.50 to <10.00	2,068	2,106	49%	2,839	4.08%	382	43.74%	1.81	3,655	128.7%	52	
	10.00 to <100.00	1,288	618	60%	1,486	28.80%	116	39.55%	1.62	3,003	202.1%	175	
	100.00 (Default)	579	534	65%	681	100.00%	91	47.71%	1.45	2,672	392.6%	186	
	<b>Sub-total</b>	<b>153,902</b>	<b>218,553</b>	<b>49%</b>	<b>260,856</b>	<b>0.73%</b>	<b>11,463</b>	<b>43.19%</b>	<b>2.18</b>	<b>120,953</b>	<b>46.4%</b>	<b>715</b>	<b>349</b>
<b>Corporate – Specialized Lending</b>													
	0.00 to <0.15	3,282	4,926	54%	6,376	0.09%	121	41.24%	2.33	1,636	25.6%	2	
	0.15 to <0.25	3,137	2,741	54%	5,614	0.16%	179	39.80%	1.78	1,750	31.2%	4	
	0.25 to <0.50	10,857	7,798	52%	13,716	0.32%	659	37.91%	1.75	5,911	43.1%	17	
	0.50 to <0.75	930	539	23%	1,009	0.71%	89	43.93%	1.24	677	67.1%	3	
	0.75 to <2.50	60	86	18%	70	1.39%	13	57.49%	1.07	75	107.0%	1	
	2.50 to <10.00	496	45	71%	351	4.45%	10	38.34%	2.83	460	131.0%	6	
	10.00 to <100.00	30	1	50%	30	30.15%	10	42.86%	1.04	72	237.9%	4	
	100.00 (Default)	23	10	89%	32	100.00%	2	41.69%	2.52	167	519.4%	1	
	<b>Sub-total</b>	<b>18,815</b>	<b>16,146</b>	<b>52%</b>	<b>27,198</b>	<b>0.46%</b>	<b>1,083</b>	<b>39.37%</b>	<b>1.89</b>	<b>10,748</b>	<b>39.5%</b>	<b>38</b>	<b>17</b>
<b>Total</b>		<b>290,682</b>	<b>248,349</b>	<b>49%</b>	<b>412,815</b>	<b>0.60%</b>	<b>13,103</b>	<b>39.25%</b>	<b>2.04</b>	<b>140,605</b>	<b>34.1%</b>	<b>852</b>	<b>380</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


(in \$MM)	PD scale	a Original on- balance sheet gross exposures	b Off- balance sheet exposures pre-CCF	c Average CCF	d EAD post- CRM and post- CCF	e Average PD <sup>(2)</sup>	f Number of obligors <sup>(3)</sup>	g Average LGD <sup>(4)</sup>	h Average maturity <sup>(5)</sup>	i RWA <sup>(6)</sup>	j RWA Density <sup>(7)</sup>	k EL	l Provisions <sup>(8)</sup>
<b>Q3 2019</b>													
<b>Sovereign</b>													
	0.00 to <0.15	87,662	1,855	37%	88,492	0.02%	100	13.58%	2.03	1,488	1.7%	3	
	0.15 to <0.25	3,009	242	10%	3,033	0.20%	3	25.40%	1.83	702	23.1%	2	
	0.25 to <0.50	1,251	516	55%	1,535	0.42%	12	22.26%	1.47	423	27.6%	1	
	0.50 to <0.75	1,948	1	44%	1,949	0.69%	12	17.85%	1.24	545	28.0%	2	
	0.75 to <2.50	972	-	100%	972	1.39%	2	16.96%	1.53	384	39.5%	2	
	2.50 to <10.00	812	-	-	812	3.10%	9	7.28%	0.73	170	21.0%	2	
	10.00 to <100.00	394	-	-	394	18.48%	1	3.06%	0.33	60	15.3%	2	
	100.00 (Default)	219	1	100%	220	100.00%	2	25.00%	4.29	2	1.0%	55	
	<b>Sub-total</b>	<b>96,267</b>	<b>2,615</b>	<b>38%</b>	<b>97,407</b>	<b>0.38%</b>	<b>141</b>	<b>14.14%</b>	<b>1.98</b>	<b>3,774</b>	<b>3.9%</b>	<b>69</b>	<b>5</b>
<b>Bank</b>													
	0.00 to <0.15	15,369	6,890	60%	19,756	0.07%	272	31.69%	0.79	2,317	11.7%	5	
	0.15 to <0.25	1,763	385	48%	1,967	0.19%	29	39.09%	0.64	594	30.2%	1	
	0.25 to <0.50	2,226	807	52%	2,419	0.37%	75	42.33%	0.40	1,011	41.8%	4	
	0.50 to <0.75	1,640	197	40%	1,718	0.56%	25	43.35%	0.46	1,047	60.9%	4	
	0.75 to <2.50	54	10	29%	57	1.39%	4	45.00%	1.80	57	99.6%	-	
	2.50 to <10.00	21	1	31%	21	2.68%	7	44.65%	1.55	25	118.6%	-	
	10.00 to <100.00	74	1	38%	75	19.57%	8	35.54%	0.94	137	183.4%	5	
	100.00 (Default)	35	3	20%	36	100.00%	6	44.51%	1.25	68	191.4%	12	
	<b>Sub-total</b>	<b>21,182</b>	<b>8,294</b>	<b>58%</b>	<b>26,049</b>	<b>0.33%</b>	<b>426</b>	<b>34.07%</b>	<b>0.72</b>	<b>5,256</b>	<b>20.2%</b>	<b>31</b>	<b>14</b>

**CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail <sup>(1)</sup>**


		a	b	c	d	e	f	g	h	i	j	k	l
(in \$MM)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD <sup>(2)</sup>	Number of obligors <sup>(3)</sup>	Average LGD <sup>(4)</sup>	Average maturity <sup>(5)</sup>	RWA <sup>(6)</sup>	RWA Density <sup>(7)</sup>	EL	Provisions <sup>(8)</sup>
<b>Corporate - Other <sup>(9)</sup></b>													
	0.00 to <0.15	52,799	109,043	54%	120,520	0.08%	1,930	38.49%	2.18	27,110	22.5%	36	
	0.15 to <0.25	15,923	31,266	48%	27,787	0.17%	1,412	43.65%	2.42	11,333	40.8%	21	
	0.25 to <0.50	52,179	48,648	43%	69,490	0.37%	4,260	49.70%	2.22	46,674	67.2%	130	
	0.50 to <0.75	18,478	14,598	40%	22,928	0.66%	2,359	46.47%	2.13	17,882	78.0%	69	
	0.75 to <2.50	5,465	5,034	40%	7,009	1.39%	681	38.88%	2.22	6,062	86.5%	38	
	2.50 to <10.00	2,394	2,357	47%	3,227	4.77%	406	40.21%	1.79	4,014	124.4%	63	
	10.00 to <100.00	1,101	601	59%	1,311	28.69%	110	41.54%	1.65	2,736	208.7%	160	
	100.00 (Default)	558	544	65%	669	100.00%	78	46.61%	1.53	2,697	403.4%	163	
	<b>Sub-total</b>	<b>148,897</b>	<b>212,091</b>	<b>49%</b>	<b>252,941</b>	<b>0.73%</b>	<b>11,236</b>	<b>42.93%</b>	<b>2.20</b>	<b>118,508</b>	<b>46.9%</b>	<b>680</b>	<b>323</b>
<b>Corporate – Specialized Lending</b>													
	0.00 to <0.15	3,728	4,887	54%	6,910	0.09%	123	41.32%	2.25	1,746	25.2%	3	
	0.15 to <0.25	3,321	2,624	51%	5,512	0.16%	179	40.15%	1.93	1,802	32.7%	4	
	0.25 to <0.50	10,332	7,022	52%	12,835	0.32%	630	37.91%	1.72	5,488	42.8%	15	
	0.50 to <0.75	1,042	566	22%	1,063	0.70%	83	43.16%	1.30	708	66.6%	3	
	0.75 to <2.50	73	78	16%	79	1.39%	10	58.14%	1.10	85	107.4%	1	
	2.50 to <10.00	371	51	68%	335	3.83%	10	39.28%	3.00	436	130.4%	5	
	10.00 to <100.00	151	18	44%	133	21.19%	12	38.69%	1.02	270	203.3%	11	
	100.00 (Default)	7	-	0%	7	100.00%	-	56.00%	1.00	13	184.6%	3	
	<b>Sub-total</b>	<b>19,025</b>	<b>15,246</b>	<b>51%</b>	<b>26,874</b>	<b>0.42%</b>	<b>1,047</b>	<b>39.54%</b>	<b>1.89</b>	<b>10,548</b>	<b>39.2%</b>	<b>45</b>	<b>18</b>
<b>Total</b>		<b>285,371</b>	<b>238,246</b>	<b>49%</b>	<b>403,271</b>	<b>0.60%</b>	<b>12,850</b>	<b>39.21%</b>	<b>2.04</b>	<b>138,086</b>	<b>34.2%</b>	<b>825</b>	<b>360</b>

(1) Excludes the retail residential mortgages insured by CMHC, Genworth Canada and Canada Guaranty Insurance.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Represents the number of individual borrowers.

(4) Post-CRM LGD weighted by post-CRM EAD.

(5) Effective remaining maturity in years.

(6) After application of AIRB scalar of 1.06.

(7) RWA density is calculated as Risk-weighted assets (column i) divided by EAD post-CRM and post-CCF (column d).

(8) Includes all three ECL stages under IFRS 9, and partial write-offs.

(9) Includes purchased receivables portfolio totaling \$0.9 billion EAD, \$0.1 billion RWA (\$0.9 billion EAD, \$0.1 billion RWA in Q4 2019; and \$1.1 billion EAD, \$0.2 billion RWA in Q3 2019).

**CR7: IRB – Effect on RWA of credit derivatives used as CRM techniques**


(in \$MM)		Q1 2020		Q4 2019		Q3 2019		Q2 2019	
		a	b	a <sub>2</sub>	b <sub>2</sub>	a <sub>3</sub>	b <sub>3</sub>	a <sub>4</sub>	b <sub>4</sub>
		Pre-credit derivatives RWA	Actual RWA <sup>(1)</sup>	Pre-credit derivatives RWA	Actual RWA <sup>(1)</sup>	Pre-credit derivatives RWA	Actual RWA <sup>(1)</sup>	Pre-credit derivatives RWA	Actual RWA <sup>(1)</sup>
1	Sovereign – FIRB	-	-	-	-	-	-	-	-
2	Sovereign – AIRB	3,702	3,702	4,006	4,006	3,774	3,774	4,214	4,214
3	Bank – FIRB	-	-	-	-	-	-	-	-
4	Bank – AIRB	4,659	4,659	4,898	4,898	5,256	5,256	4,554	4,554
5	Corporate – FIRB	-	-	-	-	-	-	-	-
6	Corporate – AIRB	119,900	119,900	120,806	120,806	118,327	118,327	113,692	113,692
7	Specialized lending – FIRB	-	-	-	-	-	-	-	-
8	Specialized lending – AIRB	11,752	11,752	10,748	10,748	10,548	10,548	11,504	11,504
9	Retail – qualifying revolving (QRRE)	15,080	15,080	13,784	13,784	13,609	13,609	13,165	13,165
10	Retail – residential mortgage exposures	27,802	27,802	27,549	27,549	25,531	25,531	24,132	24,132
11	Retail – SME	-	-	-	-	-	-	-	-
12	Other retail exposures	17,901	17,901	17,921	17,921	17,493	17,493	16,428	16,428
13	Equity – FIRB	-	-	-	-	-	-	-	-
14	Equity – AIRB	-	-	-	-	-	-	-	-
15	Purchased receivables – FIRB	-	-	-	-	-	-	-	-
16	Purchased receivables – AIRB	137	137	147	147	181	181	161	161
17	<b>Total</b>	<b>200,933</b>	<b>200,933</b>	<b>199,859</b>	<b>199,859</b>	<b>194,719</b>	<b>194,719</b>	<b>187,850</b>	<b>187,850</b>

(1) As at the reporting date, there was no impact on RWA from credit derivatives, used as a CRM technique, within the banking book.

## CR8: RWA flow statements of credit risk exposures under IRB



(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
1	<b>RWA as at end of previous reporting period</b>	199,859	194,719	187,850	183,839
2	Asset size <sup>(1)</sup>	1,904	4,677	6,769	3,265
3	Asset quality <sup>(2)</sup>	(4,928)	1,140	852	264
4	Model updates <sup>(3)</sup>	-	-	959	-
5	Methodology and policy <sup>(4)</sup>	5,946	-	-	-
6	Acquisitions and disposals <sup>(5)</sup>	(1,197)	(161)	-	184
7	Foreign exchange movements <sup>(6)</sup>	148	(516)	(1,711)	1,629
8	Other <sup>(7)</sup>	(799)	-	-	(1,331)
9	<b>RWA as at end of reporting period</b>	<b>200,933</b>	<b>199,859</b>	<b>194,719</b>	<b>187,850</b>

(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.

Specialized Lending <sup>(1)</sup> - Q1 2020											
Other than HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
					PF	OF	CF	IPRE	Total		
Strong	Less than 2.5 Years	-	-	50%	-	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	70%	-	-	-	-	-	-	-
Good	Less than 2.5 Years	-	-	70%	-	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	90%	-	-	-	-	-	-	-
Satisfactory		-	-	115%	-	-	-	-	-	-	-
Weak		-	-	250%	-	-	-	-	-	-	-
Default		-	-	-	-	-	-	-	-	-	-
Total		-	-		-	-	-	-	-	-	-
HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount				RWA	Expected Losses	
Strong	Less than 2.5 Years	-	-	70%	-				-	-	
	Equal to or more than 2.5 years	-	-	95%	-				-	-	
Good	Less than 2.5 Years	-	-	95%	-				-	-	
	Equal to or more than 2.5 years	-	-	120%	-				-	-	
Satisfactory		-	-	140%	-				-	-	
Weak		-	-	250%	-				-	-	
Default		-	-	-	-				-	-	
Total		-	-		-				-	-	
Equities under the simple risk-weight approach											
Categories			Off-balance sheet amount	RW	Exposure Amount				RWA		
Exchange-traded equity exposures			-	190%	-				-		
Private equity exposures			-	290%	-				-		
Other equity exposures			-	370%	-				-		
Total			-		-				-		

(1) As at the reporting date, specialized lending and equities under the simple risk-weight method are not applicable.



Specialized Lending <sup>(1)</sup> - Q4 2019											
Other than HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
					PF	OF	CF	IPRE	Total		
Strong	Less than 2.5 Years	-	-	50%	-	-	-	-	-	-	
	Equal to or more than 2.5 years	-	-	70%	-	-	-	-	-	-	-
Good	Less than 2.5 Years	-	-	70%	-	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	90%	-	-	-	-	-	-	-
Satisfactory		-	-	115%	-	-	-	-	-	-	-
Weak		-	-	250%	-	-	-	-	-	-	-
Default		-	-	-	-	-	-	-	-	-	-
Total		-	-		-	-	-	-	-	-	-
HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
Strong	Less than 2.5 Years	-	-	70%	-					-	-
	Equal to or more than 2.5 years	-	-	95%	-					-	-
Good	Less than 2.5 Years	-	-	95%	-					-	-
	Equal to or more than 2.5 years	-	-	120%	-					-	-
Satisfactory		-	-	140%	-					-	-
Weak		-	-	250%	-					-	-
Default		-	-	-	-					-	-
Total		-	-		-					-	-
Equities under the simple risk-weight approach											
Categories			Off-balance sheet amount	RW	Exposure Amount					RWA	
Exchange-traded equity exposures			-	190%	-					-	
Private equity exposures			-	290%	-					-	
Other equity exposures			-	370%	-					-	
Total			-		-					-	

(1) As at the reporting date, specialized lending and equities under the simple risk-weight method are not applicable.

**CCR1: Analysis of counterparty credit risk (CCR) exposure by approach <sup>(1)</sup>**


(in \$MM)		a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post- CRM	RWA
<b>Q1 2020</b>							
1	SA-CCR (for derivatives) <sup>(2)</sup>	692	1,344		1.40	2,848	1,139
2	Internal Model Method (for derivatives and SFTs) <sup>(3)</sup>			16,049	1.40	22,240	7,818
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					37,444	4,708
5	VaR for SFTs					-	-
6	<b>Total</b>						<b>13,665</b>
<b>Q4 2019</b>							
1	SA-CCR (for derivatives) <sup>(2)</sup>	816	1,374		1.40	3,063	1,360
2	Internal Model Method (for derivatives and SFTs) <sup>(3)</sup>			15,960	1.40	22,167	7,719
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					33,004	4,316
5	VaR for SFTs					-	-
6	<b>Total</b>						<b>13,395</b>
<b>Q3 2019</b>							
1	SA-CCR (for derivatives) <sup>(2)</sup>	640	1,339		1.40	2,770	1,376
2	Internal Model Method (for derivatives and SFTs) <sup>(3)</sup>			15,441	1.40	21,445	7,438
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					28,462	4,534
5	VaR for SFTs					-	-
6	<b>Total</b>						<b>13,348</b>
<b>Q2 2019</b>							
1	CEM / SA-CCR (for derivatives) <sup>(2)</sup>	356	1,324		1.40	2,349	1,141
2	Internal Model Method (for derivatives and SFTs) <sup>(3)</sup>			14,213	1.40	19,692	6,803
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					32,448	5,105
5	VaR for SFTs					-	-
6	<b>Total</b>						<b>13,049</b>

(1) Excludes exposures cleared through a CCP and CVA charges.

(2) SA-CCR was implemented for Capital reporting in Q1, 2019.

(3) Includes OTC derivatives related transactions only.

**CCR2: Credit valuation adjustment (CVA) capital charge**


(in \$MM)		Q1 2020		Q4 2019		Q3 2019		Q2 2019	
		a	b	a <sub>2</sub>	b <sub>2</sub>	a <sub>3</sub>	b <sub>3</sub>	a <sub>4</sub>	b <sub>4</sub>
		EAD post-CRM	RWA <sup>(1)</sup>	EAD post-CRM	RWA <sup>(1)</sup>	EAD post-CRM	RWA <sup>(1)</sup>	EAD post-CRM	RWA <sup>(1)</sup>
	Total portfolios subject to the Advanced CVA capital charge	24,890	5,558	24,971	6,537	24,055	5,405	22,250	5,840
1	(i) VaR component (including the 3×multiplier)		880		1,423		697		1,091
2	(ii) Stressed VaR component (including the 3×multiplier)		4,678		5,114		4,708		4,749
3	All portfolios subject to the Standardized CVA capital charge	-	-	-	-	-	-	-	-
4	Total subject to the CVA capital charge	24,890	5,558	24,971	6,537	24,055	5,405	22,250	5,840

(1) In accordance with OSFI's requirements, fully transitioned as at Q1 2019.

(in \$MM)	a	b	c	d	e	f	g	h	i
Risk weight	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure <sup>(1)</sup>
<b>Regulatory portfolio</b>									
<b>Q1 2020</b>									
Sovereigns	-	-	-	17	-	-	-	-	17
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	35	-	-	35
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	1,440	-	-	1,440
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	17	-	1,475	-	-	1,492
<b>Q4 2019</b>									
Sovereigns	-	-	-	45	-	-	-	-	45
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	27	-	-	27
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	1,641	-	-	1,641
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	45	-	1,668	-	-	1,713
<b>Q3 2019</b>									
Sovereigns	-	-	-	103	-	-	-	-	103
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	3	-	-	31	-	-	34
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	2,425	-	-	2,425
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	3	103	-	2,456	-	-	2,562
<b>Q2 2019</b>									
Sovereigns	-	-	-	26	-	-	-	-	26
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	1	-	-	44	-	-	45
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	2,069	-	-	2,069
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets <sup>(2)</sup>	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	1	26	-	2,113	-	-	2,140

(1) Total credit exposure: the amount relevant for the capital requirements calculation, having applied CRM techniques.

(2) Other assets: the amount excludes exposures to CCPs, which are reported in CCR8.

**CCR4: IRB – CCR exposures by portfolio and PD scale <sup>(1)</sup>**


(in \$MM)	PD scale	a	b	c	d	e	f	g
		EAD post-CRM	Average PD <sup>(2)</sup>	Number of obligors	Average LGD <sup>(3)</sup>	Average maturity <sup>(4)</sup>	RWA <sup>(5)</sup>	RWA Density <sup>(6)</sup>
<b>Q1 2020</b>								
<b>Sovereign</b>								
	0.00 to <0.15	6,895	0.02%	53	15.32%	1.60	178	2.6%
	0.15 to <0.25	78	0.17%	4	21.33%	0.65	10	13.1%
	0.25 to <0.50	122	0.46%	2	25.00%	0.50	32	25.9%
	0.50 to <0.75	2	0.69%	1	25.00%	1.00	1	36.3%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%
	2.50 to <10.00	-	2.56%	1	25.00%	5.00	-	90.9%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>7,097</b>	<b>0.03%</b>	<b>61</b>	<b>15.56%</b>	<b>1.57</b>	<b>221</b>	<b>3.1%</b>
<b>Bank</b>								
	0.00 to <0.15	11,347	0.06%	177	30.47%	1.05	1,464	12.9%
	0.15 to <0.25	2,109	0.17%	37	30.54%	0.46	439	20.8%
	0.25 to <0.50	297	0.36%	69	37.65%	2.06	161	54.1%
	0.50 to <0.75	21	0.59%	4	35.98%	0.83	12	56.8%
	0.75 to <2.50	-	1.33%	1	30.00%	3.72	-	82.9%
	2.50 to <10.00	-	2.56%	2	40.00%	1.44	-	103.4%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>13,774</b>	<b>0.09%</b>	<b>290</b>	<b>30.65%</b>	<b>0.98</b>	<b>2,076</b>	<b>15.1%</b>
<b>Corporate</b>								
	0.00 to <0.15	30,969	0.07%	3,466	45.79%	0.51	4,786	15.5%
	0.15 to <0.25	3,671	0.17%	530	47.24%	1.31	1,352	36.8%
	0.25 to <0.50	3,321	0.34%	718	48.15%	1.85	2,072	62.4%
	0.50 to <0.75	1,649	0.68%	332	46.83%	1.04	1,035	62.7%
	0.75 to <2.50	377	1.33%	96	41.64%	2.96	394	104.7%
	2.50 to <10.00	153	2.81%	35	47.83%	1.97	202	132.6%
	10.00 to <100.00	29	17.86%	9	28.77%	1.28	43	149.7%
	100.00 (Default)	-	100.00%	1	44.00%	1.51	-	0.0%
	<b>Sub-total</b>	<b>40,169</b>	<b>0.16%</b>	<b>5,187</b>	<b>46.12%</b>	<b>0.74</b>	<b>9,884</b>	<b>24.6%</b>
<b>Total</b>		<b>61,040</b>	<b>0.13%</b>	<b>5,538</b>	<b>39.07%</b>	<b>0.89</b>	<b>12,181</b>	<b>20.0%</b>

**CCR4: IRB – CCR exposures by portfolio and PD scale <sup>(1)</sup>**


(in \$MM)	PD scale	a	b	c	d	e	f	g
		EAD post-CRM	Average PD <sup>(2)</sup>	Number of obligors	Average LGD <sup>(3)</sup>	Average maturity <sup>(4)</sup>	RWA <sup>(5)</sup>	RWA Density <sup>(6)</sup>
<b>Q4 2019</b>								
<b>Sovereign</b>								
	0.00 to <0.15	6,492	0.02%	53	15.63%	1.72	186	2.9%
	0.15 to <0.25	100	0.16%	4	21.17%	0.63	13	12.9%
	0.25 to <0.50	31	0.44%	1	25.00%	1.00	9	28.5%
	0.50 to <0.75	8	0.72%	1	25.00%	1.00	3	37.0%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%
	2.50 to <10.00	-	2.68%	1	25.00%	5.00	-	91.7%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>6,631</b>	<b>0.02%</b>	<b>60</b>	<b>15.77%</b>	<b>1.70</b>	<b>211</b>	<b>3.2%</b>
<b>Bank</b>								
	0.00 to <0.15	11,147	0.07%	177	30.87%	1.15	1,601	14.4%
	0.15 to <0.25	1,699	0.17%	35	31.12%	0.51	372	21.9%
	0.25 to <0.50	416	0.36%	64	40.00%	1.73	233	56.0%
	0.50 to <0.75	42	0.61%	7	38.61%	2.26	29	70.2%
	0.75 to <2.50	1	1.39%	1	30.00%	1.56	-	64.3%
	2.50 to <10.00	-	2.68%	1	45.00%	1.52	-	119.0%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>13,305</b>	<b>0.09%</b>	<b>285</b>	<b>31.21%</b>	<b>1.09</b>	<b>2,235</b>	<b>16.8%</b>
<b>Corporate</b>								
	0.00 to <0.15	28,645	0.07%	3,574	46.13%	0.56	4,657	16.3%
	0.15 to <0.25	3,083	0.17%	497	46.66%	1.38	1,125	36.5%
	0.25 to <0.50	3,173	0.33%	746	48.58%	1.61	1,884	59.4%
	0.50 to <0.75	1,138	0.70%	336	47.80%	1.55	945	83.0%
	0.75 to <2.50	336	1.39%	96	42.88%	2.78	359	106.7%
	2.50 to <10.00	157	2.96%	39	50.17%	1.84	218	138.8%
	10.00 to <100.00	41	18.50%	11	33.04%	1.30	71	173.2%
	100.00 (Default)	11	100.00%	1	44.00%	1.00	-	0.0%
	<b>Sub-total</b>	<b>36,584</b>	<b>0.20%</b>	<b>5,300</b>	<b>46.41%</b>	<b>0.78</b>	<b>9,259</b>	<b>25.3%</b>
<b>Total</b>		<b>56,520</b>	<b>0.15%</b>	<b>5,645</b>	<b>39.24%</b>	<b>0.96</b>	<b>11,705</b>	<b>20.7%</b>

**CCR4: IRB – CCR exposures by portfolio and PD scale <sup>(1)</sup>**


(in \$MM)	PD scale	a	b	c	d	e	f	g
		EAD post-CRM	Average PD <sup>(2)</sup>	Number of obligors	Average LGD <sup>(3)</sup>	Average maturity <sup>(4)</sup>	RWA <sup>(5)</sup>	RWA Density <sup>(6)</sup>
<b>Q3 2019</b>								
<b>Sovereign</b>								
	0.00 to <0.15	5,780	0.02%	50	15.65%	1.96	180	3.1%
	0.15 to <0.25	37	0.17%	3	25.00%	1.03	6	16.0%
	0.25 to <0.50	14	0.44%	2	25.00%	1.00	4	28.6%
	0.50 to <0.75	4	0.72%	1	25.00%	1.00	2	37.0%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%
	2.50 to <10.00	-	2.68%	1	25.00%	5.00	-	91.7%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>5,835</b>	<b>0.03%</b>	<b>57</b>	<b>15.74%</b>	<b>1.95</b>	<b>192</b>	<b>3.3%</b>
<b>Bank</b>								
	0.00 to <0.15	11,187	0.07%	176	31.22%	1.22	1,665	14.9%
	0.15 to <0.25	1,620	0.16%	37	30.77%	0.59	360	22.2%
	0.25 to <0.50	428	0.36%	67	42.00%	1.79	245	57.2%
	0.50 to <0.75	44	0.64%	7	36.50%	1.19	24	55.3%
	0.75 to <2.50	1	1.39%	1	30.00%	1.31	1	62.0%
	2.50 to <10.00	2	2.76%	3	45.00%	1.09	2	114.2%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	<b>Sub-total</b>	<b>13,282</b>	<b>0.09%</b>	<b>291</b>	<b>31.53%</b>	<b>1.16</b>	<b>2,297</b>	<b>17.3%</b>
<b>Corporate</b>								
	0.00 to <0.15	24,009	0.07%	3,070	46.07%	0.64	4,087	17.0%
	0.15 to <0.25	2,549	0.17%	466	46.62%	1.56	990	38.8%
	0.25 to <0.50	2,995	0.34%	704	49.88%	1.55	1,838	61.4%
	0.50 to <0.75	826	0.70%	316	49.60%	1.13	681	82.5%
	0.75 to <2.50	453	1.39%	95	48.00%	3.17	565	124.8%
	2.50 to <10.00	137	3.17%	47	42.11%	2.08	169	123.7%
	10.00 to <100.00	9	18.58%	10	44.00%	1.11	21	227.6%
	100.00 (Default)	20	100.00%	1	44.00%	1.00	-	0.0%
	<b>Sub-total</b>	<b>30,998</b>	<b>0.23%</b>	<b>4,709</b>	<b>46.59%</b>	<b>0.86</b>	<b>8,351</b>	<b>26.9%</b>
<b>Total</b>		<b>50,115</b>	<b>0.17%</b>	<b>5,057</b>	<b>39.00%</b>	<b>1.06</b>	<b>10,840</b>	<b>21.6%</b>

(1) Represents AIRB exposures for Derivatives and SFT.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Post-CRM LGD weighted by post-CRM EAD.

(4) Effective remaining maturity in years.

(5) After application of AIRB scalar of 1.06.

(6) RWA density is calculated as Risk-weighted assets (column f) divided by EAD post-CRM (column a).

**CCR5: Composition of collateral for CCR exposure <sup>(1)</sup>**


(in \$MM)	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated <sup>(2)</sup>	Unsegregated <sup>(2)</sup>	Segregated <sup>(2)</sup>	Unsegregated <sup>(2)</sup>		
<b>Q1 2020</b>						
Cash – domestic currency	-	1,652	-	558	5,267	4,471
Cash – other currencies	-	7,084	35	10,580	33,808	21,670
Domestic sovereign debt	-	134	-	1,527	796	3,231
Other sovereign debt	-	837	520	25,873	4,976	4,605
Government agency debt	-	677	-	3,158	3,311	6,560
Corporate bonds	-	234	-	457	14,749	29,729
Equity securities	-	-	5	-	30,025	20,147
Other collateral	-	-	-	-	20	-
<b>Total</b>	-	<b>10,618</b>	<b>560</b>	<b>42,153</b>	<b>92,952</b>	<b>90,413</b>
<b>Q4 2019</b>						
Cash – domestic currency	-	1,431	-	359	5,651	3,842
Cash – other currencies	-	5,621	3	9,058	27,530	18,569
Domestic sovereign debt	-	181	-	1,806	838	3,679
Other sovereign debt	-	760	465	2,097	7,656	2,517
Government agency debt	-	735	-	1,953	2,033	4,914
Corporate bonds	-	227	-	1,156	15,678	24,399
Equity securities	-	-	5	-	28,234	17,178
Other collateral	-	-	-	-	18	-
<b>Total</b>	-	<b>8,955</b>	<b>473</b>	<b>16,429</b>	<b>87,638</b>	<b>75,098</b>
<b>Q3 2019</b>						
Cash – domestic currency	-	1,552	-	151	6,539	4,322
Cash – other currencies	-	5,621	-	7,124	28,485	18,366
Domestic sovereign debt	-	82	-	1,933	701	3,426
Other sovereign debt	-	636	440	1,976	3,722	2,003
Government agency debt	-	657	-	1,933	2,152	4,544
Corporate bonds	-	156	-	836	15,102	16,392
Equity securities	-	-	6	-	26,141	17,456
Other collateral	-	-	-	-	18	-
<b>Total</b>	-	<b>8,704</b>	<b>446</b>	<b>13,953</b>	<b>82,860</b>	<b>66,509</b>
<b>Q2 2019</b>						
Cash – domestic currency	-	1,953	-	87	8,203	4,091
Cash – other currencies	-	4,956	3	6,613	31,164	18,630
Domestic sovereign debt	-	144	-	2,468	328	4,623
Other sovereign debt	-	577	415	1,610	3,611	3,430
Government agency debt	-	965	-	1,908	1,315	6,270
Corporate bonds	-	133	-	439	16,922	20,632
Equity securities	-	-	5	-	27,520	18,999
Other collateral	-	-	-	-	39	-
<b>Total</b>	-	<b>8,728</b>	<b>423</b>	<b>13,125</b>	<b>89,102</b>	<b>76,675</b>

(1) Provides breakdown of collateral posted or received for SFTs or derivative transactions, including transactions cleared through CCPs.

(2) Segregated refers to collateral which is held in a bankruptcy-remote manner. Unsegregated refers to collateral that is not held in a bankruptcy-remote manner.



**CCR6: Credit derivatives exposures**


(in \$MM)	a	b
	Protection bought	Protection sold
<b>Q1 2020</b>		
<b>Notionals</b>		
Single-name credit default swaps	10,078	4,071
Index credit default swaps	-	-
Credit default swaps	10,078	4,071
Total return swaps	16,755	283
Credit options	-	-
Other credit derivatives	-	-
<b>Total notionals</b>	<b>26,833</b>	<b>4,354</b>
<b>Fair values</b>		
Positive fair value (asset)	237	14
Negative fair value (liability)	-	(37)
<b>Q4 2019</b>		
<b>Notionals</b>		
Single-name credit default swaps	7,827	3,668
Index credit default swaps	-	-
Credit default swaps	7,827	3,668
Total return swaps	15,222	14
Credit options	-	-
Other credit derivatives	-	-
<b>Total notionals</b>	<b>23,049</b>	<b>3,682</b>
<b>Fair values</b>		
Positive fair value (asset)	394	13
Negative fair value (liability)	-	(38)
<b>Q3 2019</b>		
<b>Notionals</b>		
Single-name credit default swaps	9,420	4,999
Index credit default swaps	-	-
Credit default swaps	9,420	4,999
Total return swaps	14,998	343
Credit options	-	-
Other credit derivatives	-	-
<b>Total notionals</b>	<b>24,418</b>	<b>5,342</b>
<b>Fair values</b>		
Positive fair value (asset)	243	14
Negative fair value (liability)	-	(49)
<b>Q2 2019</b>		
<b>Notionals</b>		
Single-name credit default swaps	11,997	4,750
Index credit default swaps	-	-
Credit default swaps	11,997	4,750
Total return swaps	12,969	2
Credit options	-	-
Other credit derivatives	-	-
<b>Total notionals</b>	<b>24,966</b>	<b>4,752</b>
<b>Fair values</b>		
Positive fair value (asset)	234	18
Negative fair value (liability)	-	(56)

## CCR7: RWA flow statements of CCR exposures under Internal Model Method (IMM)



(in \$MM)		a	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>
		Q1 2020	Q4 2019	Q3 2019	Q2 2019
1	RWA as at end of previous reporting period <sup>(1)</sup>	7,727	7,449	6,810	5,994
2	Asset size <sup>(2)</sup>	284	250	579	(373)
3	Asset quality <sup>(3)</sup>	(220)	28	6	1
4	Model updates <sup>(4)</sup>	(5)	-	161	1,067
5	Methodology and policy <sup>(5)</sup>	-	-	-	-
6	Acquisitions and disposals <sup>(6)</sup>	-	-	-	-
7	Foreign exchange movements <sup>(7)</sup>	41	-	(107)	121
8	Other <sup>(8)</sup>	-	-	-	-
9	RWA as at end of current reporting period	7,827	7,727	7,449	6,810

(1) Includes exposures under IMM cleared through a CCP.

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

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

(4) Changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses. Includes additional conversion of certain portfolios to IMM from SA-CCR in Q2 2019.

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

(6) Changes in book sizes from acquisitions and/or divestitures.

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

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

**CCR8: Exposures to central counterparties**


(in \$MM)		a	b	a <sub>2</sub>	b <sub>2</sub>	a <sub>3</sub>	b <sub>3</sub>	a <sub>4</sub>	b <sub>4</sub>
		EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA
		Q1 2020		Q4 2019		Q3 2019		Q2 2019	
1	<b>Exposures to QCCPs (total)</b>		<b>703</b>		<b>563</b>		<b>472</b>		<b>550</b>
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	8,675	185	9,108	194	7,463	159	8,222	174
3	(i) OTC derivatives	517	10	1,084	22	570	11	383	8
4	(ii) Exchange-traded derivatives	5,247	117	5,811	128	5,416	118	5,725	124
5	(iii) Securities financing transactions	2,911	58	2,213	44	1,477	30	2,114	42
6	(iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-	-	-
7	Segregated initial margin	6,128		5,551		3,917		4,733	
8	Non-segregated initial margin	-	-	-	-	-	-	-	-
9	Pre-funded default fund contributions	622	518	566	369	649	313	595	376
10	Unfunded default fund contributions <sup>(1)</sup>	640	-	998	-	962	-	878	-
11	<b>Exposures to non-QCCPs (total)</b>		<b>17</b>		<b>117</b>		<b>131</b>		<b>100</b>
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-	-	-	-	-	-	-
13	(i) OTC derivatives	-	-	-	-	-	-	-	-
14	(ii) Exchange-traded derivatives	-	-	-	-	-	-	-	-
15	(iii) Securities financing transactions	-	-	-	-	-	-	-	-
16	(iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-	-	-
17	Segregated initial margin	-		-		-		-	
18	Non-segregated initial margin	-	-	-	-	-	-	-	-
19	Pre-funded default fund contributions	1	17	9	117	10	131	8	100
20	Unfunded default fund contributions	-	-	-	-	-	-	-	-

(1) Unfunded default fund contributions are risk weighted at 0%.

**SEC1: Securitization exposures in the banking book**


(in \$MM)		a <sup>(1)</sup>	a <sup>(2)</sup>	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor <sup>(3)</sup>			Bank acts as Investor <sup>(4)</sup>		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
<b>Q1 2020</b>											
1	<b>Retail (total)</b>	<b>1,212</b>	<b>336</b>	-	<b>1,548</b>	<b>10,732</b>	-	<b>10,732</b>	<b>4,325</b>	-	<b>4,325</b>
	– of which										
2	Residential Mortgage <sup>(5)</sup>	-	-	-	-	510	-	510	80	-	80
3	Credit Card	134	-	-	134	1,310	-	1,310	2,075	-	2,075
4	Consumer Receivables	-	102	-	102	1,768	-	1,768	936	-	936
5	Auto Loans/Leases	1,078	234	-	1,312	7,144	-	7,144	1,234	-	1,234
6	<b>Wholesale (total)</b>	-	-	-	-	<b>8,054</b>	-	<b>8,054</b>	<b>823</b>	-	<b>823</b>
	– of which										
7	Trade Receivables	-	-	-	-	4,803	-	4,803	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	2,211	-	2,211	530	-	530
10	Other Wholesale	-	-	-	-	1,040	-	1,040	235	-	235
11	Re-Securitization	-	-	-	-	-	-	-	58	-	58

<b>Q4 2019</b>											
1	<b>Retail (total)</b>	<b>134</b>	<b>382</b>	-	<b>516</b>	<b>10,047</b>	-	<b>10,047</b>	<b>4,293</b>	-	<b>4,293</b>
	– of which										
2	Residential Mortgage <sup>(5)</sup>	-	-	-	-	510	-	510	80	-	80
3	Credit Card	134	-	-	134	1,303	-	1,303	2,076	-	2,076
4	Consumer Receivables	-	102	-	102	970	-	970	932	-	932
5	Auto Loans/Leases	-	280	-	280	7,264	-	7,264	1,205	-	1,205
6	<b>Wholesale (total)</b>	-	-	-	-	<b>8,051</b>	-	<b>8,051</b>	<b>780</b>	-	<b>780</b>
	– of which										
7	Trade Receivables	-	-	-	-	4,975	-	4,975	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	2,157	-	2,157	453	-	453
10	Other Wholesale	-	-	-	-	919	-	919	270	-	270
11	Re-Securitization	-	-	-	-	-	-	-	57	-	57

**SEC1: Securitization exposures in the banking book**


(in \$MM)		a <sup>(1)</sup>	a <sup>(2)</sup>	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor <sup>(3)</sup>			Bank acts as Investor <sup>(4)</sup>		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
<b>Q3 2019</b>											
1	<b>Retail (total)</b>	<b>134</b>	<b>382</b>	-	<b>516</b>	<b>10,551</b>	-	<b>10,551</b>	<b>4,027</b>	-	<b>4,027</b>
	– of which										
2	Residential Mortgage <sup>(5)</sup>	-	-	-	-	510	-	<b>510</b>	80	-	<b>80</b>
3	Credit Card	134	-	-	<b>134</b>	1,306	-	<b>1,306</b>	2,000	-	<b>2,000</b>
4	Consumer Receivables	-	102	-	<b>102</b>	1,303	-	<b>1,303</b>	759	-	<b>759</b>
5	Auto Loans/Leases	-	280	-	<b>280</b>	7,432	-	<b>7,432</b>	1,188	-	<b>1,188</b>
6	<b>Wholesale (total)</b>	-	-	-	-	<b>7,856</b>	-	<b>7,856</b>	<b>824</b>	-	<b>824</b>
	– of which										
7	Trade Receivables	-	-	-	-	4,639	-	<b>4,639</b>	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	25	-	<b>25</b>
9	Auto Wholesale/Rentals	-	-	-	-	2,146	-	<b>2,146</b>	385	-	<b>385</b>
10	Other Wholesale	-	-	-	-	1,071	-	<b>1,071</b>	341	-	<b>341</b>
11	Re-Securitization	-	-	-	-	-	-	-	73	-	<b>73</b>

<b>Q2 2019</b>											
1	<b>Retail (total)</b>	<b>134</b>	<b>485</b>	-	<b>619</b>	<b>11,340</b>	-	<b>11,340</b>	<b>4,053</b>	-	<b>4,053</b>
	– of which										
2	Residential Mortgage <sup>(5)</sup>	-	-	-	-	510	-	<b>510</b>	142	-	<b>142</b>
3	Credit Card	134	-	-	<b>134</b>	608	-	<b>608</b>	2,000	-	<b>2,000</b>
4	Consumer Receivables	-	205	-	<b>205</b>	1,897	-	<b>1,897</b>	670	-	<b>670</b>
5	Auto Loans/Leases	-	280	-	<b>280</b>	8,325	-	<b>8,325</b>	1,241	-	<b>1,241</b>
6	<b>Wholesale (total)</b>	-	-	-	-	<b>7,374</b>	-	<b>7,374</b>	<b>812</b>	-	<b>812</b>
	– of which										
7	Trade Receivables	-	-	-	-	3,507	-	<b>3,507</b>	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	25	-	<b>25</b>
9	Auto Wholesale/Rentals	-	-	-	-	2,072	-	<b>2,072</b>	395	-	<b>395</b>
10	Other Wholesale	-	-	-	-	1,795	-	<b>1,795</b>	318	-	<b>318</b>
11	Re-Securitization	-	-	-	-	-	-	-	74	-	<b>74</b>

(1) Retained positions where the Bank acts as an originator and has achieved significant and effective risk transfer.

(2) Retained positions where the Bank acts as an originator and has not achieved significant and effective risk transfer.

(3) Retained positions where the Bank acts as sponsor include exposures to commercial paper conduits to which the bank provides liquidity facilities.

(4) Retained positions where the Bank acts as an investor are the investment positions purchased in third-party deals.

(5) Excludes mortgage-backed securities that do not involve the tranching of credit risk (e.g. NHA MBS) which are not considered securitizations as per OSFI Capital Adequacy Requirements Guideline, Chapter 7, paragraph 3.

**SEC2: Securitization exposures in the Trading book**


(in \$MM)		a <sup>(1)</sup>	a <sup>(2)</sup>	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor <sup>(3)</sup>			Bank acts as Investor <sup>(4)</sup>		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
<b>Q1 2020</b>											
1	<b>Retail (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	72	-	72
	– of which										
2	Residential Mortgage <sup>(6)</sup>	-	-	-	-	-	-	-	-	-	-
3	Credit Card	-	-	-	-	-	-	-	67	-	67
4	Consumer Receivables	-	-	-	-	-	-	-	-	-	-
5	Auto Loans/Leases	-	-	-	-	-	-	-	5	-	5
6	<b>Wholesale (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	27	-	27
	– of which										
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	18	-	18
10	Other Wholesale	-	-	-	-	-	-	-	9	-	9
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-

<b>Q4 2019</b>											
1	<b>Retail (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	151	-	151
	– of which										
2	Residential Mortgage <sup>(6)</sup>	-	-	-	-	-	-	-	6	-	6
3	Credit Card	-	-	-	-	-	-	-	81	-	81
4	Consumer Receivables	-	-	-	-	-	-	-	53	-	53
5	Auto Loans/Leases	-	-	-	-	-	-	-	11	-	11
6	<b>Wholesale (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	35	-	35
	– of which										
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	24	-	24
10	Other Wholesale	-	-	-	-	-	-	-	11	-	11
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-

## SEC2: Securitization exposures in the Trading book



(in \$MM)		a <sup>(1)</sup>	a <sup>(2)</sup>	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor <sup>(3)</sup>			Bank acts as Investor <sup>(4)</sup>		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
<b>Q3 2019</b>											
1	<b>Retail (total)</b> <sup>(5)</sup>	-	52	-	52	-	-	-	30	-	30
	– of which										
2	Residential Mortgage <sup>(6)</sup>	-	-	-	-	-	-	-	1	-	1
3	Credit Card	-	-	-	-	-	-	-	-	-	-
4	Consumer Receivables	-	52	-	52	-	-	-	16	-	16
5	Auto Loans/Leases	-	-	-	-	-	-	-	13	-	13
6	<b>Wholesale (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	55	-	55
	– of which										
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	42	-	42
10	Other Wholesale	-	-	-	-	-	-	-	13	-	13
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-

<b>Q2 2019</b>											
1	<b>Retail (total)</b> <sup>(5)</sup>	-	66	-	66	-	-	-	9	-	9
	– of which										
2	Residential Mortgage <sup>(6)</sup>	-	-	-	-	-	-	-	-	-	-
3	Credit Card	-	-	-	-	-	-	-	-	-	-
4	Consumer Receivables	-	66	-	66	-	-	-	-	-	-
5	Auto Loans/Leases	-	-	-	-	-	-	-	9	-	9
6	<b>Wholesale (total)</b> <sup>(5)</sup>	-	-	-	-	-	-	-	33	-	33
	– of which										
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	19	-	19
10	Other Wholesale	-	-	-	-	-	-	-	14	-	14
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-

(1) Retained positions where the Bank acts as an originator and has achieved significant and effective risk transfer.

(2) Retained positions where the Bank acts as an originator and has not achieved significant and effective risk transfer.

(3) Retained positions where the Bank acts as sponsor include exposures to commercial paper conduits to which the bank provides liquidity facilities.

(4) Retained positions where the Bank acts as an investor are the investment positions purchased in third-party deals.

(5) Capital charges related to trading book securitization exposures are based upon the Bank's internal market risk models including its comprehensive risk measure.

(6) Excludes mortgage-backed securities that do not involve the tranching of credit risk (e.g. NHA MBS) which are not considered securitizations as per OSFI Capital Adequacy Requirements Guideline, Chapter 7, paragraph 3.

**SEC3: Securitization exposures in the banking book and associated regulatory capital requirements**  
**– bank acting as originator or as sponsor**



(in \$MM)		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)				Capital charge after cap			
		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
<b>Q1 2020</b>																		
<b>1</b>	<b>Total exposures <sup>(1)(2)</sup></b>	<b>16,614</b>	<b>2,500</b>	<b>881</b>	<b>-</b>	<b>3</b>	<b>1,078</b>	<b>18,920</b>	<b>-</b>	<b>-</b>	<b>205</b>	<b>3,341</b>	<b>-</b>	<b>-</b>	<b>16</b>	<b>267</b>	<b>-</b>	<b>-</b>
2	Traditional securitization	16,614	2,500	881	-	3	1,078	18,920	-	-	205	3,341	-	-	16	267	-	-
3	Of which securitization	16,614	2,500	881	-	3	1,078	18,920	-	-	205	3,341	-	-	16	267	-	-
4	Of which retail underlying	11,181	608	152	-	3	1,078	10,866	-	-	205	1,591	-	-	16	127	-	-
5	Of which wholesale	5,433	1,892	729	-	-	-	8,054	-	-	-	1,750	-	-	-	140	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q4 2019</b>																		
<b>1</b>	<b>Total exposures <sup>(1)(2)</sup></b>	<b>15,140</b>	<b>2,233</b>	<b>859</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18,232</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,200</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>256</b>	<b>-</b>	<b>-</b>
2	Traditional securitization	15,140	2,233	859	-	-	-	18,232	-	-	-	3,200	-	-	-	256	-	-
3	Of which securitization	15,140	2,233	859	-	-	-	18,232	-	-	-	3,200	-	-	-	256	-	-
4	Of which retail underlying	9,566	481	134	-	-	-	10,181	-	-	-	1,464	-	-	-	117	-	-
5	Of which wholesale	5,574	1,752	725	-	-	-	8,051	-	-	-	1,736	-	-	-	139	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**SEC3: Securitization exposures in the banking book and associated regulatory capital requirements**  
**– bank acting as originator or as sponsor**



(in \$MM)	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)				Capital charge after cap			
	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
<b>Q3 2019</b>																	
<b>1 Total exposures <sup>(1)(2)</sup></b>	<b>15,159</b>	<b>2,521</b>	<b>861</b>	-	-	-	<b>18,541</b>	-	-	-	<b>3,278</b>	-	-	-	<b>262</b>	-	-
2 Traditional securitization	15,159	2,521	861	-	-	-	18,541	-	-	-	3,278	-	-	-	262	-	-
3 Of which securitization	15,159	2,521	861	-	-	-	18,541	-	-	-	3,278	-	-	-	262	-	-
4 Of which retail underlying	9,920	631	134	-	-	-	10,685	-	-	-	1,553	-	-	-	124	-	-
5 Of which wholesale	5,239	1,890	727	-	-	-	7,856	-	-	-	1,725	-	-	-	138	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q2 2019</b>																	
<b>1 Total exposures <sup>(1)(2)</sup></b>	<b>15,691</b>	<b>2,842</b>	<b>315</b>	-	-	-	<b>18,848</b>	-	-	-	<b>3,263</b>	-	-	-	<b>261</b>	-	-
2 Traditional securitization	15,691	2,842	315	-	-	-	18,848	-	-	-	3,263	-	-	-	261	-	-
3 Of which securitization	15,691	2,842	315	-	-	-	18,848	-	-	-	3,263	-	-	-	261	-	-
4 Of which retail underlying	10,626	635	213	-	-	-	11,474	-	-	-	1,824	-	-	-	146	-	-
5 Of which wholesale	5,065	2,207	102	-	-	-	7,374	-	-	-	1,439	-	-	-	115	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Includes banking book on-balance sheet investments in asset backed securities (ABS), collateralized loan obligations (CLOs), collateralized debt obligations (CDOs), and off-balance sheet liquidity lines and credit enhancements to bank sponsored conduits.

(2) Included in on-balance sheet exposures are investment grade subordinated notes retained by the Bank, issued by Trillium Credit Card Trust II, and backed by Bank originated credit card receivables. OSFI's Securitization Framework is applied.

**SEC4: Securitization exposures in the banking book and associated capital requirements – bank acting as investor**


( in \$MM)	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)				Capital charge after cap			
	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	ERBA / IAA	IRB SFA	SA/SSF A	1250%	ERBA / IAA	IRB SFA	SA/SSF A	1250%	ERBA / IAA	IRB SFA	SA/SSF A	1250%
<b>Q1 2020</b>																	
<b>1 Total exposures <sup>(1)</sup></b>	<b>2,613</b>	<b>931</b>	<b>1,604</b>	-	-	-	<b>5,090</b>	<b>58</b>	-	-	<b>1,599</b>	<b>58</b>	-	-	<b>128</b>	<b>5</b>	-
2 Traditional securitization	2,613	931	1,604	-	-	-	5,090	58	-	-	1,599	58	-	-	128	5	-
3 Of which securitization	2,613	931	1,546	-	-	-	5,090	-	-	-	1,599	-	-	-	128	-	-
4 Of which retail underlying	2,613	761	951	-	-	-	4,325	-	-	-	1,163	-	-	-	93	-	-
5 Of which wholesale	-	170	595	-	-	-	765	-	-	-	436	-	-	-	35	-	-
6 Of which re-securitization	-	-	58	-	-	-	-	58	-	-	-	58	-	-	-	5	-
7 Of which senior	-	-	58	-	-	-	-	58	-	-	-	58	-	-	-	5	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q4 2019</b>																	
<b>1 Total exposures <sup>(1)</sup></b>	<b>2,429</b>	<b>1,042</b>	<b>1,561</b>	<b>41</b>	-	-	<b>5,016</b>	<b>57</b>	-	-	<b>1,606</b>	<b>57</b>	-	-	<b>128</b>	<b>5</b>	-
2 Traditional securitization	2,429	1,042	1,561	41	-	-	5,016	57	-	-	1,606	57	-	-	128	5	-
3 Of which securitization	2,429	1,042	1,504	41	-	-	5,016	-	-	-	1,606	-	-	-	128	-	-
4 Of which retail underlying	2,429	932	932	-	-	-	4,293	-	-	-	1,143	-	-	-	91	-	-
5 Of which wholesale	-	110	572	41	-	-	723	-	-	-	463	-	-	-	37	-	-
6 Of which re-securitization	-	-	57	-	-	-	-	57	-	-	-	57	-	-	-	5	-
7 Of which senior	-	-	57	-	-	-	-	57	-	-	-	57	-	-	-	5	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**SEC4: Securitization exposures in the banking book and associated capital requirements – bank acting as investor**


( in \$MM)	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)				Capital charge after cap			
	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	ERBA / IAA	IRB SFA	SA/SSF A	1250%	ERBA / IAA	IRB SFA	SA/SSF A	1250%	ERBA / IAA	IRB SFA	SA/SSF A	1250%
<b>Q3 2019</b>																	
<b>1 Total exposures <sup>(1)</sup></b>	<b>2,331</b>	<b>869</b>	<b>1,568</b>	<b>83</b>	-	-	<b>4,778</b>	<b>73</b>	-	-	<b>1,608</b>	<b>73</b>	-	-	<b>129</b>	<b>6</b>	-
2 Traditional securitization	2,331	869	1,568	83	-	-	4,778	73	-	-	1,608	73	-	-	129	6	-
3 Of which securitization	2,331	869	1,495	83	-	-	4,778	-	-	-	1,608	-	-	-	129	-	-
4 Of which retail underlying	2,331	759	854	83	-	-	4,027	-	-	-	1,127	-	-	-	91	-	-
5 Of which wholesale	-	110	641	-	-	-	751	-	-	-	481	-	-	-	38	-	-
6 Of which re-securitization	-	-	73	-	-	-	-	73	-	-	-	73	-	-	-	6	-
7 Of which senior	-	-	73	-	-	-	-	73	-	-	-	73	-	-	-	6	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q2 2019</b>																	
<b>1 Total exposures <sup>(1)</sup></b>	<b>2,425</b>	<b>783</b>	<b>1,574</b>	<b>83</b>	-	-	<b>4,791</b>	<b>74</b>	-	-	<b>1,608</b>	<b>74</b>	-	-	<b>129</b>	<b>6</b>	-
2 Traditional securitization	2,425	783	1,574	83	-	-	4,791	74	-	-	1,608	74	-	-	129	6	-
3 Of which securitization	2,425	783	1,500	83	-	-	4,791	-	-	-	1,608	-	-	-	129	-	-
4 Of which retail underlying	2,425	670	875	83	-	-	4,053	-	-	-	1,140	-	-	-	92	-	-
5 Of which wholesale	-	113	625	-	-	-	738	-	-	-	468	-	-	-	37	-	-
6 Of which re-securitization	-	-	74	-	-	-	-	74	-	-	-	74	-	-	-	6	-
7 Of which senior	-	-	74	-	-	-	-	74	-	-	-	74	-	-	-	6	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Includes banking book investments in asset backed securities (ABS), collateralized loan obligations (CLOs), collateralized debt obligations (CDOs).

# FLOW STATEMENT FOR REGULATORY CAPITAL



(in \$MM)	Basel III All-in							
	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019	Q4 2018	Q3 2018	Q2 2018
<b>Common Equity Tier 1 (CET1) capital</b>								
<b>Opening amount</b>	<b>46,578</b>	46,565	46,193	45,344	44,443	46,777	45,025	42,990
Net income attributable to equity holders of the Bank	2,287	2,201	1,864	2,189	2,136	2,179	1,983	2,107
Dividends paid to equity holders of the Bank	(1,117)	(1,158)	(1,087)	(1,127)	(1,070)	(1,108)	(1,038)	(1,047)
Shares issued	38	51	46	48	110	16	2,596	34
Shared repurchased/redeemed	(268)	(356)	(196)	(289)	(234)	(380)	(74)	-
Removal of own credit spread (net of tax)	123	(6)	(20)	29	(40)	(6)	(33)	(21)
Movements in other comprehensive income (OCI), excluding cash flow hedges	(1,188)	(734)	(1,044)	247	338	(556)	87	1,158
Currency translation differences	(941)	(805)	(778)	380	562	(566)	(70)	1,222
Debt and equity investments fair valued through OCI	64	(2)	51	50	77	(63)	(19)	(92)
Employee Benefits	(268)	46	(347)	(190)	(339)	81	158	5
Other	(43)	27	30	7	38	(8)	18	23
Goodwill and other intangible assets (deduction, net of related tax liability)	448	134	482	(150)	(182)	(2,384)	(2,367)	(222)
Other, including regulatory adjustments and transitional arrangements	903	(119)	327	(98)	(157)	(95)	598	26
Deferred tax assets that rely on future probability	15	9	15	12	13	8	(2)	41
IFRS 15 (2019) <sup>(1)</sup>	-	-	-	-	(58)	-	-	-
Threshold deductions	907	(84)	277	(112)	(125)	(270)	(133)	(41)
Other	(19)	(44)	35	2	13	167	733	26
<b>Closing Amount</b>	<b>47,804</b>	<b>46,578</b>	<b>46,565</b>	<b>46,193</b>	<b>45,344</b>	<b>44,443</b>	<b>46,777</b>	<b>45,025</b>
<b>Other Additional Tier 1 capital</b>								
<b>Opening amount</b>	<b>4,726</b>	4,806	5,516	5,525	5,744	5,763	5,683	5,658
Capital issuances	-	-	-	-	-	300	-	-
Redeemed capital	-	-	(650)	-	(300)	(350)	-	(345)
Other, capital including regulatory adjustments and transitional arrangements (NVCC)	(93)	(80)	(60)	(9)	81	31	80	370
<b>Closing Amount</b>	<b>4,633</b>	<b>4,726</b>	<b>4,806</b>	<b>5,516</b>	<b>5,525</b>	<b>5,744</b>	<b>5,763</b>	<b>5,683</b>
<b>Total Tier 1 capital</b>	<b>52,437</b>	<b>51,304</b>	<b>51,371</b>	<b>51,709</b>	<b>50,869</b>	<b>50,187</b>	<b>52,540</b>	<b>50,708</b>
<b>Tier 2 capital</b>								
<b>Opening amount</b>	<b>8,546</b>	10,175	9,146	8,927	7,177	7,297	7,008	6,989
Capital issuances	-	-	1,500	-	1,750	-	-	-
Redeemed capital	-	(1,750)	(4)	(17)	-	-	-	(119)
Amortization adjustments	-	-	-	-	-	-	-	-
Other, including regulatory adjustments and transitional adjustments (NVCC)	409	121	(467)	236	-	(120)	289	138
<b>Closing Amount</b>	<b>8,955</b>	<b>8,546</b>	<b>10,175</b>	<b>9,146</b>	<b>8,927</b>	<b>7,177</b>	<b>7,297</b>	<b>7,008</b>
<b>Total regulatory capital</b>	<b>61,392</b>	<b>59,850</b>	<b>61,546</b>	<b>60,855</b>	<b>59,796</b>	<b>57,364</b>	<b>59,837</b>	<b>57,716</b>

(1) Represents the full transitional impact on retained earnings from the Bank's adoption of IFRS 15 (Revenue Contracts) on November 1, 2018.

# RISK-WEIGHTED ASSETS AND CAPITAL RATIOS



(in \$billions)	Basel III - All-in							
	IFRS 9 <sup>(1)</sup>							
	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019	Q4 2018	Q3 2018	Q2 2018
<b>RISK-WEIGHTED ASSETS:</b> <sup>(2)</sup>								
<b>On-Balance Sheet Assets</b>								
Cash Resources	2.9	2.9	3.5	3.4	3.6	3.9	3.3	3.5
Securities	9.5	7.4	7.7	7.8	7.7	7.9	8.9	8.5
Residential Mortgages	38.8	40.5	39.3	38.2	37.7	35.9	37.2	32.0
Loans								
- Personal Loans	62.8	62.4	62.5	60.5	60.9	59.3	59.6	54.3
- Non-Personal Loans	136.3	136.2	136.5	137.3	131.7	130.0	131.1	118.6
All Other	31.7	33.0	33.7	35.0	33.5	31.9	32.1	32.2
	282.0	282.4	283.2	282.2	275.1	268.9	272.2	249.1
<b>Off-Balance Sheet Assets</b>								
Indirect Credit Instruments	56.3	55.6	53.7	54.5	53.9	54.2	55.1	53.5
Derivative Instruments	14.2	15.3	13.9	13.6	13.9	13.0	12.9	12.1
	70.5	70.9	67.6	68.1	67.8	67.2	68.0	65.6
<b>Total Credit Risk before AIRB scaling factor</b>	352.5	353.3	350.8	350.3	342.9	336.1	340.2	314.7
AIRB Scaling factor <sup>(3)</sup>	12.2	12.1	11.8	11.4	11.0	11.0	11.0	10.7
<b>Total Credit Risk after AIRB scaling factor</b>	364.7	365.4	362.6	361.7	353.9	347.1	351.2	325.4
Market Risk - Risk Assets Equivalent	9.6	8.7	7.8	7.0	9.0	8.4	16.4	8.8
Operational Risk - Risk Assets Equivalent	46.4	47.1	46.7	46.5	45.7	45.0	43.8	41.7
Regulatory Capital Floor Adjustment to CET1 RWA <sup>(4)</sup>	-	-	-	-	-	-	-	-
<b>CET1 Risk-Weighted Assets</b> <sup>(4)(5)</sup>	420.7	421.2	417.1	415.2	408.6	400.5	411.4	375.9
<b>Tier 1 Risk-Weighted Assets</b> <sup>(4)(5)</sup>	420.7	421.2	417.1	415.2	408.6	400.7	411.6	376.0
<b>Total Risk-Weighted Assets</b> <sup>(4)(5)</sup>	420.7	421.2	417.1	415.2	408.6	400.9	411.8	376.2
<b>REGULATORY CAPITAL RATIOS (%):</b>								
Common Equity Tier 1	11.4	11.1	11.2	11.1	11.1	11.1	11.4	12.0
Tier 1	12.5	12.2	12.3	12.5	12.5	12.5	12.8	13.5
Total	14.6	14.2	14.8	14.7	14.6	14.3	14.5	15.3

(1) Effective Q1 2018, the Bank adopted IFRS 9 (Financial Instruments). The full transitional impact on regulatory capital from IFRS 9 was recognized upon adoption.

(2) For purposes of this presentation only, Risk-Weighted Assets (RWA) are shown by balance sheet categories. Details by Basel III exposure type are shown on tab EAD\_RWA (page 6), "Exposure at Default and Risk-Weighted Assets for Credit Risk Portfolios".

(3) The Basel Framework requires an additional 6% scaling factor to AIRB credit risk portfolios (excluding CVA, and Securitizations).

(4) The Bank did not have a regulatory capital floor add-on for CET1, Tier 1 and Total capital risk-weighted assets from April 30, 2018 onwards. As at January 31, 2018, the Bank had a regulatory capital floor add-on for CET1, Tier 1 and Total capital risk-weighted assets of \$16.4 billion, \$16.3 billion and \$16.2 billion respectively.

(5) As per OSFI guideline, effective Q1 2014, Credit Valuation Adjustment (CVA) RWA on derivatives were phased-in using Scalars. Commencing in Q1, 2019, the CVA risk-weighted assets have been fully phased-in (scalars of 0.80, 0.83 and 0.86 were used to compute the CET1 capital ratio, Tier 1 capital ratio and Total capital ratio, respectively in Fiscal 2018).

**MOVEMENT OF RISK-WEIGHTED ASSETS BY RISK TYPE (ALL-IN BASIS)**


Credit Risk RWA <sup>(1)</sup> (in \$MM)	Q1 2020		Q4 2019	
	Credit Risk	Of which Counterparty Credit Risk <sup>(6)</sup>	Credit Risk	Of which Counterparty Credit Risk <sup>(6)</sup>
Credit risk-weighted assets as at beginning of Quarter	365,431	20,126	362,607	18,911
Book size <sup>(2)</sup>	6,240	29	5,144	1,236
Book quality <sup>(3)</sup>	(5,263)	(335)	1,116	(24)
Model updates <sup>(4)</sup>	22	22	-	-
Methodology and policy <sup>(5)</sup>	9,528	-	-	-
Acquisitions and disposals	(9,444)	-	(827)	-
Foreign exchange movements	(1,031)	101	(2,609)	3
Other	(799)	-	-	-
<b>Credit risk-weighted assets as at end of Quarter</b>	<b>364,684</b>	<b>19,943</b>	<b>365,431</b>	<b>20,126</b>

(1) In accordance with OSFI's requirements, in Q1, 2019, the CVA risk-weighted assets have been fully phased-in.

(2) Book size is defined as organic changes in book size and composition (including new business and maturing loans).

(3) 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.

(4) Model updates are defined as model implementation, change in model scope or any change to address model enhancement.

(5) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes, such as new regulation (e.g. Basel III).

(6) Excludes risk-weighted assets for default fund contributions to a CCP in Q4 2019, while Q1, 2020 includes an amount of \$535MM.

Market Risk RWA (in \$MM)	Q1 2020	Q4 2019
Market risk-weighted assets as at beginning of Quarter	8,674	7,755
Movement in risk levels <sup>(1)</sup>	1,059	1,053
Model updates <sup>(2)</sup>	(134)	(134)
Methodology and policy <sup>(3)</sup>	-	-
Acquisitions and disposals	-	-
Other	-	-
<b>Market risk-weighted assets as at end of Quarter</b>	<b>9,599</b>	<b>8,674</b>

(1) Movement in risk levels is defined as changes in risk due to position changes and market movements. Foreign exchange movements are embedded within Movement in risk levels.

(2) Model updates are defined as updates to the model to reflect recent experience and change in model scope.

(3) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes (e.g. Basel III).

Operational Risk RWA (in \$MM)	Q1 2020	Q4 2019
Operational risk-weighted assets as at beginning of Quarter	47,079	46,696
Acquisitions and disposals	(1,062)	-
Higher Revenue	394	383
<b>Operational risk-weighted assets as at end of Quarter</b>	<b>46,411</b>	<b>47,079</b>

# RISK-WEIGHTED ASSETS ARISING FROM THE ACTIVITIES OF THE BANK'S BUSINESSES



(in \$billions)	Q1 2020					
Risk-weighted Assets (RWA)	Canadian Banking	International Banking	Global Banking & Markets	Global Wealth Management	Other	All Bank
RWA	\$128.1	\$163.3	\$102.9	\$16.8	\$9.6	\$420.7
Proportion of Bank	30%	40%	24%	4%	2%	100%
Comprised of:						
Credit risk	88%	89%	85%	64%	98%	87%
Market risk	- %	1%	7%	- %	10%	2%
Operational risk	12%	10%	8%	36%	-8%	11%

(in \$billions)	Q4 2019 <sup>(1)</sup>					
Risk-weighted Assets (RWA)	Canadian Banking	International Banking	Global Banking & Markets	Global Wealth Management	Other	All Bank
RWA	\$123.4	\$172.2	\$100.8	\$16.5	\$8.3	\$421.2
Proportion of Bank	29%	41%	24%	4%	2%	100%
Comprised of:						
Credit risk	87%	89%	85%	62%	99%	87%
Market risk	- %	1%	6%	- %	13%	2%
Operational risk	13%	10%	9%	38%	-12%	11%

(1) Prior quarter has been restated to conform with the current period presentation.

# CREDIT RISK EXPOSURES BY GEOGRAPHY<sup>(1)(2)</sup>



## Exposure at Default

(in \$MM)	Q1 2020					Q4 2019				
	Non-Retail			Retail	Total	Non-Retail			Retail	Total
	Drawn	Undrawn	Other <sup>(3)</sup>			Drawn	Undrawn	Other <sup>(3)</sup>		
Canada	112,226	47,178	36,633	358,804	554,841	112,412	45,419	33,232	358,170	549,233
USA	118,348	37,253	42,903	-	198,504	95,268	37,529	43,239	-	176,036
Chile	24,434	1,509	3,961	23,560	53,464	23,476	1,309	4,077	24,659	53,521
Mexico	22,955	1,531	2,930	13,227	40,643	21,392	1,189	2,871	12,517	37,969
Peru	19,228	771	3,303	10,043	33,345	19,246	745	3,139	9,824	32,954
Colombia	5,686	321	766	7,305	14,078	5,382	397	637	7,257	13,673
Other International										
Europe	28,314	7,994	18,728	-	55,036	23,050	6,656	16,179	-	45,885
Caribbean	15,986	1,677	1,411	13,628	32,702	17,841	1,849	1,476	17,470	38,636
Latin America (other)	11,518	1,044	243	712	13,517	10,478	999	239	686	12,402
All Other	22,700	4,845	5,783	43	33,371	23,699	4,069	5,403	44	33,215
<b>Total</b>	<b>381,395</b>	<b>104,123</b>	<b>116,661</b>	<b>427,322</b>	<b>1,029,501</b>	<b>352,244</b>	<b>100,161</b>	<b>110,492</b>	<b>430,627</b>	<b>993,524</b>

(in \$MM)	Q3 2019	Q2 2019	Q1 2019	Q4 2018	Q3 2018
Canada	537,512	523,215	517,036	521,803	514,606
USA	172,432	182,903	172,791	178,139	162,339
Chile	54,741	56,720	55,919	53,152	57,505
Mexico	37,128	38,005	36,332	33,294	34,730
Peru	32,317	33,737	30,088	28,495	28,989
Colombia	14,256	14,242	14,268	13,649	14,790
Other International					
Europe	42,202	41,874	44,626	42,613	42,181
Caribbean	39,151	40,825	38,772	38,302	38,527
Latin America (other)	12,747	12,601	12,207	11,368	9,814
All Other	32,791	31,894	33,286	28,419	27,267
<b>Total</b>	<b>975,277</b>	<b>976,016</b>	<b>955,325</b>	<b>949,234</b>	<b>930,748</b>

(1) Before credit risk mitigation, excluding equity investment securities and other assets.

(2) Geographic segmentation is based upon the location of the ultimate risk of the credit exposure.

(3) Includes off-balance sheet lending instruments such as letters of credit and letters of guarantee, OTC derivatives, securitization and repo-style transactions net of related collateral.



# AIRB CREDIT RISK EXPOSURES BY MATURITY <sup>(1)(2)</sup>



## Exposure at Default

(in \$MM)	Q1 2020				Q4 2019			
	Drawn	Undrawn	Other <sup>(3)</sup>	Total	Drawn	Undrawn	Other <sup>(3)</sup>	Total
<b>Non-Retail</b>								
Less than 1 year	169,382	31,865	70,774	272,021	144,421	30,058	65,738	240,217
1 to 5 years	126,077	65,502	27,191	218,770	122,302	63,091	27,516	212,909
Over 5 Years	24,280	3,051	9,207	36,538	23,960	3,142	7,205	34,307
<b>Total Non-Retail</b>	<b>319,739</b>	<b>100,418</b>	<b>107,172</b>	<b>527,329</b>	<b>290,683</b>	<b>96,291</b>	<b>100,459</b>	<b>487,433</b>
<b>Retail</b>								
Less than 1 year	40,091	19,656	-	59,747	40,732	21,004	-	61,736
1 to 5 years	195,007	-	-	195,007	192,344	-	-	192,344
Over 5 Years	15,100	-	-	15,100	15,488	-	-	15,488
Revolving Credits <sup>(4)</sup>	38,588	30,938	-	69,526	39,084	29,839	-	68,923
<b>Total Retail</b>	<b>288,786</b>	<b>50,594</b>	<b>-</b>	<b>339,380</b>	<b>287,648</b>	<b>50,843</b>	<b>-</b>	<b>338,491</b>
<b>Total</b>	<b>608,525</b>	<b>151,012</b>	<b>107,172</b>	<b>866,709</b>	<b>578,331</b>	<b>147,134</b>	<b>100,459</b>	<b>825,924</b>

(in \$MM)	Q3 2019	Q2 2019	Q1 2019	Q4 2018
<b>Non-Retail</b>				
Less than 1 year	230,979	233,111	229,133	235,630
1 to 5 years	212,331	212,906	207,500	208,800
Over 5 Years	28,482	28,868	20,268	17,618
<b>Total Non-Retail</b>	<b>471,792</b>	<b>474,885</b>	<b>456,901</b>	<b>462,048</b>
<b>Retail</b>				
Less than 1 year	60,038	58,231	54,149	50,941
1 to 5 years	188,817	185,000	187,947	188,922
Over 5 Years	15,493	14,975	14,761	15,259
Revolving Credits <sup>(4)</sup>	68,223	67,124	67,901	68,467
<b>Total Retail</b>	<b>332,571</b>	<b>325,330</b>	<b>324,758</b>	<b>323,589</b>
<b>Total</b>	<b>804,363</b>	<b>800,215</b>	<b>781,659</b>	<b>785,637</b>

(1) Before credit risk mitigation, excluding equity investment securities and other assets.

(2) Remaining term to maturity of the credit exposure.

(3) Off-balance sheet lending instruments such as letters of credit and letters of guarantee, securitization, derivatives and repo-style transactions net of related collateral.

(4) Credit cards and lines of credit with unspecified maturity.

# AIRB CREDIT LOSSES



Exposure Type	Q1 2020		Q4 2019		Q3 2019		Q2 2019		Q1 2019	
	Actual Loss Rate	Expected Loss Rate	Actual Loss Rate	Expected Loss Rate	Actual Loss Rate	Expected Loss Rate	Actual Loss Rate	Expected Loss Rate	Actual Loss Rate	Expected Loss Rate
	%	%	%	%	%	%	%	%	%	%
<b>Non-Retail<sup>(1)</sup></b>										
Corporate	<b>0.06</b>	<b>0.38</b>	0.03	0.45	0.04	0.49	0.04	0.52	0.07	0.49
Sovereign	-	<b>0.07</b>	-	0.06	-	0.06	-	0.02	-	0.03
Bank	-	<b>0.10</b>	-	0.08	-	0.09	-	0.10	-	0.10
<b>Retail<sup>(2)</sup></b>										
Real Estate Secured	<b>0.01</b>	<b>0.15</b>	0.01	0.15	0.01	0.15	0.01	0.14	0.01	0.13
QRRE	<b>3.32</b>	<b>3.98</b>	3.18	3.83	2.93	3.88	2.64	3.69	2.55	4.02
Other Retail	<b>0.63</b>	<b>1.64</b>	0.62	1.55	0.59	1.61	0.58	1.60	0.58	1.74

- (1) Non-retail actual loss rates represent the credit losses net of recoveries for the current and prior three quarters divided by the 5-point average of outstanding loan balances for the same four-quarter period beginning 12 months ago. Expected loss rates represent the expected losses that were predicted at the beginning of the four-quarter period divided by outstanding loan balances at the beginning of the four-quarter period.
- (2) Retail actual loss rates represent write-offs net of recoveries for the current and prior three quarters divided by the 5-point average of outstanding loan balances for the same four-quarter period beginning 12 months ago. Expected loss rates represent the expected losses that were predicted at the beginning of the four-quarter period divided by outstanding loan balances at the beginning of the four-quarter period.

# ESTIMATED AND ACTUAL LOSS PARAMETERS - NON-RETAIL AND RETAIL AIRB PORTFOLIOS



(in \$MM) <sup>(1)</sup>	Q1 2020						Q4 2019					
	Average estimated PD %	Actual default rate %	Average estimated LGD %	Actual LGD %	Average estimated CCF <sup>(2)</sup> %	Actual CCF <sup>(2)</sup> %	Average estimated PD %	Actual default rate %	Average estimated LGD %	Actual LGD %	Average estimated CCF <sup>(2)</sup> %	Actual CCF <sup>(2)</sup> %
Non-Retail	0.68	0.18	40.74	27.30	48.91	19.51	0.72	0.20	40.79	23.00	48.96	24.77

(1) Reporting is on a one quarter lag basis. For reporting as of Q1/20, estimated parameters are based on portfolio averages at Q4/18 whereas actual parameters are based on averages of realized parameters during the subsequent four quarters (Q1/19 – Q4/19).

(2) EAD back-testing is performed through Credit Conversion Factor (CCF) back-testing, as EAD is computed using the sum of the drawn exposure and undrawn exposure multiplied by the estimated CCF.

(in \$MM) <sup>(1)</sup>	Four-quarter period ending Q1 2020						Four-quarter period ending Q4 2019					
	Average estimated PD <sup>(2)(7)</sup> %	Actual default rate <sup>(2)(5)</sup> %	Average estimated LGD <sup>(3)(7)</sup> %	Actual LGD <sup>(3)(6)</sup> %	Estimated EAD <sup>(4)(7)</sup> \$	Actual EAD <sup>(4)(5)</sup> \$	Average estimated PD <sup>(2)(7)</sup> %	Actual default rate <sup>(2)(5)</sup> %	Average estimated LGD <sup>(3)(7)</sup> %	Actual LGD <sup>(3)(6)</sup> %	Estimated EAD <sup>(4)(7)</sup> \$	Actual EAD <sup>(4)(5)</sup> \$
Residential real estate secured												
Residential mortgages												
Insured mortgages <sup>(8)</sup>	0.76	0.51	-	-	-	-	0.78	0.51	-	-	-	-
Uninsured mortgages	0.58	0.32	18.82	11.46	-	-	0.58	0.32	19.11	11.33	-	-
Secured lines of credit	0.37	0.23	29.59	15.94	89	81	0.36	0.23	29.72	18.80	91	83
Qualifying revolving retail exposures	1.98	1.48	77.44	70.62	736	639	1.96	1.49	77.45	73.13	721	624
Other retail	1.71	1.11	62.17	52.47	9	8	1.79	1.10	62.34	55.22	8	8

(1) Estimates and Actual Values are recalculated to align with new models implemented during the period.

(2) Account weighted aggregation.

(3) Default weighted aggregation.

(4) EAD is estimated for revolving products only.

(5) Actual based on accounts not at default as at four quarters prior to reporting date.

(6) Actual LGD calculated based on 24-month recovery period after default and therefore excludes any recoveries received after the 24-month period.

(7) Estimates are based on the four quarters prior to the reporting date.

(8) Actual and Estimated LGD for insured mortgages are not shown. Actual LGD includes the insurance benefit, whereas estimated LGD may not.

# DERIVATIVES - COUNTERPARTY CREDIT RISK <sup>(1)</sup>



(in \$MM)	Q1 2020				Q4 2019				Q3 2019				Q2 2019			
Contract Types	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount <sup>(3)</sup>	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount <sup>(3)</sup>	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount <sup>(3)</sup>	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount <sup>(3)</sup>
<b>Interest Rate Contracts:</b>																
Futures and Forward Rate Agreements	627,059	26	273	101	668,387	49	288	127	520,394	85	251	120	387,188	37	196	70
Swaps	4,060,298	5,603	6,544	2,295	3,852,031	5,345	6,369	2,145	3,542,415	3,514	6,207	2,006	3,747,573	2,116	4,772	1,449
Options Purchased	29,999	40	41	17	38,644	42	43	19	30,502	38	36	18	30,666	36	50	23
Options Written	30,562	-	21	9	33,315	-	26	10	30,092	-	13	5	33,989	-	5	2
<b>Total</b>	<b>4,747,918</b>	<b>5,669</b>	<b>6,879</b>	<b>2,422</b>	<b>4,592,377</b>	<b>5,436</b>	<b>6,726</b>	<b>2,301</b>	<b>4,123,403</b>	<b>3,637</b>	<b>6,507</b>	<b>2,149</b>	<b>4,199,416</b>	<b>2,189</b>	<b>5,023</b>	<b>1,544</b>
<b>Foreign Exchange Contracts:</b>																
Futures and Forwards	542,190	5,588	4,267	1,739	503,221	3,594	5,029	1,797	510,208	2,574	4,374	1,764	484,041	1,715	4,028	1,720
Swaps	469,233	3,562	6,703	2,609	455,837	2,188	7,099	2,762	434,391	3,076	7,003	2,751	430,719	2,428	6,378	2,547
Options Purchased	38,928	660	277	150	45,576	755	284	157	48,957	854	280	115	47,520	829	287	117
Options Written	38,985	-	35	9	45,353	-	35	8	49,090	-	38	8	47,627	-	37	8
<b>Total</b>	<b>1,089,336</b>	<b>9,810</b>	<b>11,282</b>	<b>4,507</b>	<b>1,049,987</b>	<b>6,537</b>	<b>12,447</b>	<b>4,724</b>	<b>1,042,646</b>	<b>6,504</b>	<b>11,695</b>	<b>4,638</b>	<b>1,009,907</b>	<b>4,972</b>	<b>10,730</b>	<b>4,392</b>
<b>Other Derivatives Contracts:</b>																
Equity	144,520	652	8,010	1,145	132,690	698	7,882	1,166	130,081	609	7,386	1,208	124,430	398	7,260	1,131
Credit	31,187	124	251	66	26,731	167	295	98	29,760	113	418	112	29,720	108	268	88
Other	116,730	1,205	4,428	519	131,084	693	4,775	513	115,637	812	4,194	433	105,423	1,273	4,868	576
<b>Total</b>	<b>292,437</b>	<b>1,981</b>	<b>12,689</b>	<b>1,730</b>	<b>290,505</b>	<b>1,558</b>	<b>12,952</b>	<b>1,777</b>	<b>275,478</b>	<b>1,534</b>	<b>11,998</b>	<b>1,753</b>	<b>259,573</b>	<b>1,779</b>	<b>12,396</b>	<b>1,795</b>
<b>Credit Valuation Adjustment<sup>(2)</sup></b>				<b>5,558</b>				<b>6,537</b>				<b>5,405</b>				<b>5,840</b>
<b>Total Derivatives after Netting and Collateral</b>	<b>6,129,691</b>	<b>17,460</b>	<b>30,850</b>	<b>14,217</b>	<b>5,932,869</b>	<b>13,531</b>	<b>32,125</b>	<b>15,339</b>	<b>5,441,527</b>	<b>11,675</b>	<b>30,200</b>	<b>13,945</b>	<b>5,468,896</b>	<b>8,940</b>	<b>28,149</b>	<b>13,571</b>

(1) The impact of Master Netting Agreements and Collateral has been incorporated within the various contracts. As a result, risk-weighted amounts are reported net of impact of collateral and master netting arrangements.

(2) In accordance with OSFI's requirements, commencing Q1 2019, the CVA risk-weighted assets, have been fully phased-in.

(3) Includes derivative exposures cleared through CCPs. Excludes (i) risk weighted assets for default fund contributions to a CCP and (ii) the 6% AIRB scalar.

## TOTAL MARKET RISK-WEIGHTED ASSETS



(in \$MM)	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
All Bank VaR	1,665	1,595	1,425	1,339	1,489
All Bank stressed VaR	5,728	5,378	4,396	3,993	5,356
Incremental risk charge	1,378	1,086	1,407	1,251	1,772
Comprehensive risk measure <sup>(1)</sup>	-	-	-	-	-
Standardized approach	828	615	527	466	406
<b>Market risk-weighted assets as at end of Quarter</b>	<b>9,599</b>	<b>8,674</b>	<b>7,755</b>	<b>7,049</b>	<b>9,023</b>

(1) Comprehensive risk measure charges are no longer applicable as of Q4 2017.

<b>Credit Risk Parameters</b>	
Exposure at Default (EAD)	Generally represents the expected gross exposures at default and includes outstanding amounts for on-balance sheet exposures and loan equivalent amounts for off-balance sheet exposures.
Probability of Default (PD)	Measures the likelihood that a borrower will default within a 1-year time horizon, expressed as a percentage.
Loss Given Default (LGD)	Measures the severity of loss on a facility in the event of a borrower's default, expressed as a percentage of exposure at default.
<b>Exposure Types</b>	
Non-retail	
Corporate	Debt obligation of a corporation, partnership, or proprietorship.
Bank	Debt obligation of a bank or bank equivalent (including certain public sector entities (PSEs) treated as Bank equivalent exposures).
Sovereign	Debt obligation of a sovereign, central bank, certain Multilateral Development Banks (MDBs) and certain PSEs treated as Sovereign.
Securitization	On-balance sheet investments in asset backed securities (ABS), mortgage backed securities (MBS), collateralized loan obligations (CLOs) and collateralized debt obligations (CDOs). Off-balance sheet liquidity lines include credit enhancements to Bank's sponsored ABCP conduits and liquidity lines to non-bank sponsored ABCP conduits.
Retail	
Real Estate Secured	
Residential Mortgages	Loans to individuals against residential property (four units or less).
Secured Lines Of Credit	Revolving personal lines of credit secured by first charge on residential real estate.
Qualifying Revolving Retail Exposures (QRRE)	Credit cards and unsecured line of credit for individuals.
Other Retail	All other personal loans.
<b>Exposure Sub-types</b>	
Drawn	Outstanding amounts for loans, leases, acceptances, deposits with banks and available-for-sale debt securities.
Undrawn	Unutilized portion of an authorized credit line.
Repo-Style Transactions	Reverse repurchase agreements (reverse repos) and repurchase agreements (repos), securities lending and borrowing.
Over-the-counter (OTC) Derivatives	Over-the-counter derivatives contracts.
Exchange-traded derivatives (ETD)	Derivative contracts (e.g. futures contracts and options) that are transacted on an organized futures exchange. These include Futures contracts (both Long and Short positions), Purchased Options and Written Options.
Other Off-Balance Sheet	Direct credit substitutes such as standby letters of credits and guarantees, trade letters of credits, and performance letters of credits and guarantees.
Qualifying central counterparty (QCCP)	A qualifying central counterparty (QCCP) is licensed as a central counterparty and is also considered as "qualifying" when it is compliant with CPSS-IOSCO standards and is able to assist clearing member banks in properly capitalizing for CCP exposures by either undertaking the calculations and/or making available sufficient information to its clearing members, or others, to enable the completion of capital calculations.
Non-qualifying central counterparties (NQCCP)	Defined as those central counterparties which are not compliant with CPSS-IOSCO standards as outlined under qualifying CCP's. The exposures to NQCCP will follow standardized treatment under the Basel accord.
<b>Other</b>	
Asset Value Correlation Multiplier (AVC)	Basel III has increased the risk-weights on exposures to certain Financial Institutions (FIs) relative to the non-financial corporate sector by introducing an Asset Value Correlation multiplier (AVC). The correlation factor in the risk-weight formula is multiplied by this AVC factor of 1.25 for all exposures to regulated FIs whose total assets are greater than or equal to US \$100 billion and all exposures to unregulated FIs.
Regulatory Capital Floor	A minimum capital floor requirement is prescribed for institutions that use the AIRB approach for credit risk. Up to and including Q1 2018, the capital floor add-on was determined by comparing a capital requirement calculated by reference to Basel I against the Basel III calculation, as prescribed by OSFI. A shortfall in the Basel III capital requirement compared with the Basel I capital floor was added to RWAs. Effective Q2 2018, OSFI has replaced the Basel I regulatory capital floor with a capital floor based on the Basel II standardized approach for credit risk. Revised capital floor requirements also include risk-weighted assets for market risk and CVA.
Specific Wrong-Way Risk (WWR)	Specific Wrong-Way Risk arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the transactions with the counterparty.
Credit Valuation Adjustment (CVA)	Credit Valuation Adjustment (CVA) is the difference between the risk free value of a portfolio and the true value of that portfolio, accounting for the possible default of a counterparty. CVA adjustment aims to identify the impact of Counterparty Risk.