

First Quarter 2020



Royal Bank of Canada first quarter 2020 results

All amounts are in Canadian dollars and are based on financial statements prepared in compliance with International Accounting Standard 34 *Interim Financial Reporting*, unless otherwise noted.

Net Income
\$3.5 Billion
Record earnings

Diluted EPS⁽¹⁾
\$2.40
Strong 12% growth YoY

ROE⁽²⁾
17.6%
Balanced capital deployment

CET1 Ratio
12.0%
Robust capital levels

TORONTO, February 21, 2020 — Royal Bank of Canada (RY on TSX and NYSE) today reported net income of \$3,509 million for the quarter ended January 31, 2020, up \$337 million or 11% from the prior year, with strong diluted EPS growth of 12%. Results were driven by record earnings in Capital Markets, as well as by strong earnings growth in Personal & Commercial Banking reflecting continued robust volume growth in our Canadian Banking franchise. Solid earnings growth in Wealth Management and Insurance also contributed to the increase. These factors were partially offset by lower results in Investor & Treasury Services.

Compared to last quarter, net income was up \$303 million with higher results in Capital Markets, Investor & Treasury Services, Personal & Commercial Banking, and Corporate Support. These factors were partially offset by lower earnings in Wealth Management and Insurance. Q4 2019 results included a gain on the sale of the private debt business of BlueBay (\$134 million after-tax) in Wealth Management, which was largely offset by higher severance and related costs (\$83 million after-tax) associated with the repositioning of our Investor & Treasury Services business, as well as by an unfavourable accounting adjustment (\$41 million after-tax) in Corporate Support.

Results this quarter also reflect lower provisions for credit losses (PCL), with a total PCL on loans ratio of 26 basis points (bps). PCL on impaired loans ratio of 21 bps improved 6 bps from last quarter, due to lower provisions on impaired loans in Personal & Commercial Banking and Wealth Management. Our capital position remained robust, with a Common Equity Tier 1 (CET1) ratio of 12.0%. In addition, today we announced an increase to our quarterly dividend of \$0.03 or 3% to \$1.08 per share.

"We had a strong start to the year with earnings growth of 11% year-over-year. These results reflect the underlying strength of our diversified business mix, our focused strategy, and our colleagues' unwavering commitment to creating more value for clients as we position the bank for the future. In addition to delivering record earnings this quarter, we are pleased to increase our quarterly dividend by three per cent. Against the uncertain macroeconomic backdrop, we remain focused on prudently managing our risks, leveraging our scale and competitive position, and balancing our investments in technology and talent for long-term, sustainable growth."

– Dave McKay, RBC President and Chief Executive Officer

Q1 2020 Compared to Q1 2019

- Net income of \$3,509 million ↑ 11%
- Diluted EPS⁽¹⁾ of \$2.40 ↑ 12%
- ROE⁽²⁾ of 17.6% ↑ 90 bps
- CET1 ratio of 12.0% ↑ 60 bps

Q1 2020 Compared to Q4 2019

- Net income of \$3,509 million ↑ 9%
- Diluted EPS⁽¹⁾ of \$2.40 ↑ 10%
- ROE⁽²⁾ of 17.6% ↑ 140 bps
- CET1 ratio of 12.0% ↓ 10 bps

(1) Earnings per share (EPS).

(2) Return on Equity (ROE). This measure does not have a standardized meaning under GAAP. For further information, refer to the Key performance and non-GAAP measures section of this Q1 2020 Report to Shareholders.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three month period ended or as at January 31, 2020, compared to the corresponding period in the prior fiscal year and the three month period ended October 31, 2019. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended January 31, 2020 (Condensed Financial Statements) and related notes and our 2019 Annual Report. This MD&A is dated February 20, 2020. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise noted.

Additional information about us, including our 2019 Annual Information Form, is available free of charge on our website at rbc.com/investorrelations, on the Canadian Securities Administrators' website at sedar.com and on the EDGAR section of the United States (U.S.) Securities and Exchange Commission's (SEC) website at sec.gov.

Information contained in or otherwise accessible through the websites mentioned herein does not form part of this report. All references in this report to websites are inactive textual references and are for your information only.

Caution regarding forward-looking statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this Q1 2020 Report to Shareholders, in other filings with Canadian regulators or the SEC, in other reports to shareholders, and in other communications. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the Economic, market, and regulatory review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, and the risk environment including our liquidity and funding risk, and includes our President and Chief Executive Officer's statements. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the risk sections of our 2019 Annual Report and the Risk management section of this Q1 2020 Report to Shareholders; including information technology and cyber risk, privacy, data and third party related risks, geopolitical uncertainty, Canadian housing and household indebtedness, regulatory changes, digital disruption and innovation, climate change, the business and economic conditions in the geographic regions in which we operate, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, and environmental and social risk.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this Q1 2020 Report to Shareholders are set out in the Economic, market and regulatory review and outlook section and for each business segment under the Strategic priorities and Outlook headings in our 2019 Annual Report, as updated by the Economic, market and regulatory review and outlook section of this Q1 2020 Report to Shareholders. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the risk sections of our 2019 Annual Report and the Risk management section of this Q1 2020 Report to Shareholders.

Overview and outlook

About Royal Bank of Canada

Royal Bank of Canada is a global financial institution with a purpose-driven, principles-led approach to delivering leading performance. Our success comes from the 85,000+ employees who bring our vision, values and strategy to life so we can help our clients thrive and communities prosper. As Canada's biggest bank, and one of the largest in the world based on market capitalization, we have a diversified business model with a focus on innovation and providing exceptional experiences to our 17 million clients in Canada, the U.S. and 34 other countries. Learn more at rbc.com.

Selected financial and other highlights

(Millions of Canadian dollars, except per share, number of and percentage amounts) (1)	As at or for the three months ended			For the three months ended	
	January 31 2020	October 31 2019	January 31 2019	Q1 2020 vs. Q4 2019	Q1 2020 vs. Q1 2019
Total revenue	\$ 12,836	\$ 11,370	\$ 11,589	\$ 1,466	\$ 1,247
Provision for credit losses (PCL)	419	499	514	(80)	(95)
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	1,614	654	1,225	960	389
Non-interest expense	6,378	6,319	5,912	59	466
Income before income taxes	4,425	3,898	3,938	527	487
Net income	\$ 3,509	\$ 3,206	\$ 3,172	\$ 303	\$ 337
Segments – net income					
Personal & Commercial Banking	\$ 1,686	\$ 1,618	\$ 1,571	\$ 68	\$ 115
Wealth Management	623	729	597	(106)	26
Insurance	181	282	166	(101)	15
Investor & Treasury Services	143	45	161	98	(18)
Capital Markets	882	584	653	298	229
Corporate Support	(6)	(52)	24	46	(30)
Net income	\$ 3,509	\$ 3,206	\$ 3,172	\$ 303	\$ 337
Selected information					
Earnings per share (EPS) – basic	\$ 2.41	\$ 2.19	\$ 2.15	\$ 0.22	\$ 0.26
– diluted	2.40	2.18	2.15	0.22	0.25
Return on common equity (ROE) (2) (3)	17.6%	16.2%	16.7%	140 bps	90 bps
Average common equity (2)	\$ 77,850	\$ 76,600	\$ 73,550	\$ 1,250	\$ 4,300
Net interest margin (NIM) – on average earning assets (4)	1.59%	1.60%	1.60%	(1) bps	(1) bps
PCL on loans as a % of average net loans and acceptances	0.26%	0.32%	0.34%	(6) bps	(8) bps
PCL on performing loans as a % of average net loans and acceptances	0.05%	0.05%	0.06%	- bps	(1) bps
PCL on impaired loans as a % of average net loans and acceptances	0.21%	0.27%	0.28%	(6) bps	(7) bps
Gross impaired loans (GIL) as a % of loans and acceptances	0.45%	0.46%	0.46%	(1) bps	(1) bps
Liquidity coverage ratio (LCR) (5)	129%	127%	128%	200 bps	100 bps
Capital ratios and Leverage ratio					
Common Equity Tier 1 (CET1) ratio	12.0%	12.1%	11.4%	(10) bps	60 bps
Tier 1 capital ratio	13.1%	13.2%	12.7%	(10) bps	40 bps
Total capital ratio	14.9%	15.2%	14.5%	(30) bps	40 bps
Leverage ratio	4.2%	4.3%	4.3%	(10) bps	(10) bps
Selected balance sheet and other information (6)					
Total assets (7)	\$ 1,476,304	\$ 1,428,935	\$ 1,366,216	\$ 47,369	\$ 110,088
Securities, net of applicable allowance	266,667	249,004	235,832	17,663	30,835
Loans, net of allowance for loan losses	629,940	618,856	589,820	11,084	40,120
Derivative related assets	93,982	101,560	84,816	(7,578)	9,166
Deposits (4)	902,284	886,005	851,679	16,279	50,605
Common equity (7)	78,256	77,816	74,123	440	4,133
Total capital risk-weighted assets	523,725	512,856	508,512	10,869	15,213
Assets under management (AUM)	799,900	762,300	688,000	37,600	111,900
Assets under administration (AUA) (8)	5,723,700	5,678,000	5,363,900	45,700	359,800
Common share information					
Shares outstanding (000s) – average basic	1,427,599	1,432,685	1,437,074	(5,086)	(9,475)
– average diluted	1,433,060	1,438,257	1,443,195	(5,197)	(10,135)
– end of period	1,423,212	1,430,096	1,435,073	(6,884)	(11,861)
Dividends declared per common share	\$ 1.05	\$ 1.05	\$ 0.98	\$ –	\$ 0.07
Dividend yield (9)	4.0%	4.0%	4.1%	- bps	(10) bps
Dividend payout ratio	44%	48%	45%	(400) bps	(100) bps
Common share price (RY on TSX) (10)	\$ 104.58	\$ 106.24	\$ 100.02	\$ (1.66)	\$ 4.56
Market capitalization (TSX) (10)	148,840	151,933	143,536	(3,093)	5,304
Business information (number of)					
Employees (full-time equivalent) (FTE)	82,491	82,801	82,108	(310)	383
Bank branches	1,330	1,327	1,334	3	(4)
Automated teller machines (ATMs)	4,619	4,600	4,568	19	51
Period average US\$ equivalent of C\$1.00 (11)	\$ 0.760	\$ 0.755	\$ 0.749	\$ 0.005	\$ 0.011
Period-end US\$ equivalent of C\$1.00	\$ 0.756	\$ 0.759	\$ 0.761	\$ (0.003)	\$ (0.005)

(1) Effective November 1, 2019, we adopted IFRS 16 Leases. Results from periods prior to November 1, 2019 are reported in accordance with IAS 17 Leases in this Q1 2020 Report to Shareholders. For further details on the impacts of the adoption of IFRS 16 including the description of accounting policies selected, refer to Note 2 of our Condensed Financial Statements.

(2) Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes Average common equity used in the calculation of ROE. For further details, refer to the Key performance and non-GAAP measures section.

(3) These measures may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.

(4) Commencing Q4 2019, the interest component and the accrued interest payable recorded on certain deposits carried at Fair Value Through Profit and Loss (FVTPL) previously presented in trading revenue and deposits, respectively, are presented in net interest income and other liabilities, respectively. Comparative amounts have been reclassified to conform with this presentation.

(5) LCR is the average for the three months ended for each respective period and is calculated in accordance with the Office of the Superintendent of Financial Institutions' (OSFI) Liquidity Adequacy Requirements (LAR) guideline. For further details, refer to the Liquidity and funding risk section.

(6) Represents period-end spot balances.

(7) Effective Q4 2019, the transition adjustment related to the adoption of IFRS 15 Revenue from Contracts with Customers was revised. The comparative amounts have been revised from those previously presented.

(8) AUA includes \$15.4 billion and \$7.8 billion (October 31, 2019 – \$15.5 billion and \$8.1 billion; January 31, 2019 – \$16.6 billion and \$8.5 billion) of securitized residential mortgages and credit card loans, respectively.

(9) Defined as dividends per common share divided by the average of the high and low share price in the relevant period.

(10) Based on TSX closing market price at period-end.

(11) Average amounts are calculated using month-end spot rates for the period.

Economic, market and regulatory review and outlook – data as at February 20, 2020

The predictions and forecasts in this section are based on information and assumptions from sources we consider reliable. If this information or these assumptions are not accurate, actual economic outcomes may differ materially from the outlook presented in this section.

Economic and market review and outlook

Canada

The Canadian economy is expected to have grown by a modest 0.3%¹ in the final calendar quarter of 2019, down from an already below-trend pace of 1.3%¹ in the prior calendar quarter. The slowdown partially reflects transitory factors, including labour and transportation disruptions. However, the underlying pace of growth also appears to have slowed somewhat and job growth was less robust in the last calendar quarter of 2019. While recent indicators suggest global growth has stabilized albeit at a slower pace alongside easing trade tensions, Canada's manufacturing sector continues to soften and business investment is likely to remain modest. Additional transitory factors in the first calendar quarter of 2020, such as reduced rail transportation services, will offset some of the rebound from the previous calendar quarter's transitory factors. Lower mortgage rates and relatively strong population growth continue to support housing, however, elevated household debt levels continue to restrain consumer spending. We expect only a moderate rebound in GDP growth in the first calendar quarter of 2020. The Bank of Canada (BoC) has held its overnight rate steady at 1.75% for fifteen consecutive months but indicated the possibility of a rate cut if growth remains slow.

U.S.

The U.S. economy grew at a healthy 2.1%¹ in the final calendar quarter of 2019, matching the prior calendar quarter's increase. Labour markets and consumer spending remain solid, and housing activity has picked up amid lower interest rates. Although business investment and industrial production have been soft, recent easing in trade tensions, including the phase one trade agreement between the U.S. and China, pending ratification of the Canada-United States-Mexico Agreement (CUSMA), as well as modest improvement in business sentiment, suggest scope for improvement in the coming quarters. We expect U.S. GDP will grow at a trend-like pace in the first calendar quarter of 2020. After cutting its benchmark interest rate three times in calendar 2019, the Federal Reserve (Fed) is expected to hold rates steady throughout calendar 2020.

Europe

Euro area GDP growth slowed to 0.1% in the final calendar quarter of 2019 following a 0.3% increase in the previous calendar quarter. Both the French and Italian economies contracted at the end of calendar 2019 and survey data show some improvement in the manufacturing sector and stabilization in the services industries. GDP growth is expected to return closer to its longer-term trend in calendar 2020, supported by accommodative monetary policy from the European Central Bank that is expected to remain in place throughout the year. The U.K. left the European Union (EU) on January 31, 2020 but will maintain full access to the single market during a transition period that is set to continue until the end of calendar 2020. Less near-term concern about a no-deal Brexit has boosted business sentiment, though U.K. GDP growth remained soft in the final calendar quarter of 2019. The Bank of England held interest rates steady in January, with the expectation that GDP growth will pick up in early 2020.

Financial markets

Concerns about the economic impact of the COVID-19 outbreak have pushed government bond yields lower, weighed on equity markets in Asia and commodity prices have also declined amid demand concerns. Government bond yields are expected to increase when COVID-19 fears fade, but geopolitical risks, ongoing trade tensions and indications that monetary policy will remain stimulative will likely prevent a more substantial increase in yields. The increase in oil prices in early-calendar 2020 due to U.S.-Iran tensions was not sustained.

Regulatory environment

We continue to monitor and prepare for regulatory developments and changes in a manner that seeks to ensure compliance with new requirements while mitigating any adverse business or financial impacts. Such impacts could result from new or amended laws and regulations and the expectations of those who enforce them. A high level summary of the key regulatory changes that have the potential to increase or decrease our costs and the complexity of our operations is included in the Legal and regulatory environment risk section of our 2019 Annual Report, as updated below.

Global uncertainty

Despite easing of trade tensions, trade policy and geopolitical tensions continue to pose risks to the global economic outlook. In January 2020, the International Monetary Fund further lowered its 2020 and 2021 global growth projections amid threats related to global trade and tensions in the Middle East. On January 31, 2020, the U.K. withdrew from the EU and entered into a transition period during which time the two parties will be negotiating their trade and security agreement before the December 31, 2020 deadline. Both the U.S. and Mexico have ratified CUSMA. After its ratification by Canada, CUSMA will help reduce lingering uncertainty about trade within North America. In January 2020, the U.S. and China agreed to a phase one deal which, among other provisions will provide relief on some tariffs; however, remaining tariffs may continue to pressure trade activity and the broader U.S.-China relationship. Concerns about the impact of the COVID-19 outbreak on the global economy amid disruptions in world-wide trades and supply chains has weighed on global markets. The global financial markets are also

¹ Annualized rate

vulnerable to rising tensions between the U.S. and the Middle East and could result in increased market volatility and/or higher commodity prices. Our diversified business model, as well as our product and geographic diversification, continue to help mitigate the risk of global uncertainty.

Canadian benchmark rate for qualifying insured mortgages

On February 18, 2020, the Department of Finance Canada announced changes to the minimum qualifying rate for insured mortgages. As a result of a review conducted by the federal financial agencies, it was concluded that the minimum qualifying benchmark rate should be more responsive to changes in market conditions. Effective April 6, 2020, the new benchmark rate will be the weekly median 5-year fixed insured mortgage rate plus 2%, compared to the current benchmark rate of the five-year fixed rate posted by the Domestic Systemically Important Banks (D-SIBs). We are currently assessing the impacts and we will continue to monitor for any further developments, including any future changes to the benchmark rate for uninsured mortgages.

Client focused reforms

The Canadian Securities Administrators (CSA) published amendments to National Instrument 31-103 to implement the Client Focused Reforms (Reforms), which are intended to increase the standard of conduct required for Canadian securities registrants. The Reforms enhance core requirements relating to conflicts of interest, suitability, know-your-product and know-your-client requirements, and also introduce new requirements relating to relationship disclosure, training and recordkeeping. The changes come into effect in two phases: the first phase relating to conflicts of interest and the related disclosure requirements comes into effect on December 31, 2020, and the second phase relating to the remaining requirements, on December 31, 2021. The requirements will primarily impact our Personal & Commercial Banking and Wealth Management platforms. We do not anticipate any significant challenges in meeting these requirements by the effective dates.

United States regulatory initiatives

Policymakers continue to evaluate and implement reforms to various U.S. financial regulations, which could result in either expansion of or reductions to U.S. regulatory requirements and associated changes in compliance costs. In January 2020, the Fed finalized the *Control and Divestiture Proceedings* rule which is intended to clarify its process for determining when an entity is under control of a bank holding company and is effective on April 1, 2020. The rule is intended to simplify and provide greater transparency for determining control of a banking organization by establishing a comprehensive framework to determine when a company controls a bank or a bank controls a company. We are currently assessing the impacts of the rule and we do not anticipate any significant challenges in meeting these rules by the effective date.

U.K. and European regulatory reform

In addition to the implications from the U.K.'s withdrawal from the EU, other forthcoming regulatory initiatives include the EU's published regulations on Sustainability-Related Disclosures which will require financial services firms to disclose their approaches to considering environmental, social and governance factors as part of their advice and investment decision process. These requirements are effective on March 10, 2021 and we are currently assessing the impact on adoption.

For a discussion on risk factors, including our framework and activities to manage these risks and other regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks and Legal and regulatory environment risk sections of our 2019 Annual Report and the Risk and Capital management sections of this Q1 2020 Report to Shareholders.

Financial performance

Overview

Q1 2020 vs. Q1 2019

Net income of \$3,509 million was up \$337 million or 11% from a year ago. Diluted earnings per share (EPS) of \$2.40 was up \$0.25 or 12% and return on common equity (ROE) of 17.6% was up 90 bps from 16.7% last year. Our Common Equity Tier 1 (CET1) ratio of 12.0% was up 60 bps from a year ago.

Our results reflected strong earnings growth in Capital Markets and Personal & Commercial Banking, and solid earnings in Wealth Management and Insurance, partially offset by lower results in Investor & Treasury Services.

Capital Markets results increased primarily due to higher revenue in Global Markets and Corporate and Investment Banking, as well as lower PCL. These factors were partially offset by higher compensation on improved results and a higher effective tax rate, largely reflecting changes in earnings mix.

Personal & Commercial Banking earnings were up mainly due to average volume growth of 8% in Canadian Banking and higher balances driving higher mutual fund distribution fees, partially offset by lower spreads and an increase in technology and related costs. The prior year also included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados.

Wealth Management results were up primarily due to an increase in average fee-based client assets and higher transaction volumes. These factors were partially offset by higher variable compensation commensurate with revenue growth, as well as higher technology and staff-related costs. The prior year was also impacted by a favourable accounting adjustment related to Canadian Wealth Management.

Insurance results increased mainly due to new longevity reinsurance contracts, partially offset by the lower impact from reinsurance contract renegotiations.

Investor & Treasury Services earnings decreased primarily due to lower client deposit margins and lower revenue from our asset services business.

For further details on our business segment results and CET1 ratio, refer to the Business segment results and Capital management sections, respectively.

Q1 2020 vs. Q4 2019

Net income of \$3,509 million was up \$303 million or 9% from the prior quarter. Diluted EPS of \$2.40 was up \$0.22 or 10% and ROE of 17.6% was up 140 bps. Our CET1 ratio of 12.0% was down 10 bps.

Our results reflected strong earnings growth in Capital Markets, and higher results in Investor & Treasury Services, Personal & Commercial Banking and Corporate Support, partially offset by lower earnings in Wealth Management and Insurance.

Capital Markets earnings increased primarily due to higher revenue in Global Markets and Corporate and Investment Banking. These factors were partially offset by higher compensation on improved results and a higher effective tax rate, largely reflecting changes in earnings mix.

Investor & Treasury Services earnings increased primarily due to severance and related costs associated with the repositioning of the business in the prior quarter.

Personal & Commercial Banking results were up mainly due to lower PCL and higher card service revenue.

Wealth Management earnings decreased mainly due to the gain on sale of the private debt business of BlueBay in the prior quarter.

Insurance earnings were down primarily due to the impact of lower favourable investment-related experience, new longevity reinsurance contracts and reinsurance contract renegotiations.

Corporate Support net income was \$6 million in the current quarter, largely reflecting residual unallocated costs and net unfavourable tax adjustments, partially offset by asset/liability management activities. Net loss was \$52 million in the prior quarter largely due to the impact of an unfavourable accounting adjustment.

Impact of foreign currency translation

The following table reflects the estimated impact of foreign currency translation on key income statement items:

	For the three months ended	
	Q1 2020 vs. Q1 2019	Q1 2020 vs. Q4 2019
(Millions of Canadian dollars, except per share amounts)		
<i>Increase (decrease):</i>		
Total revenue	\$ (65)	\$ 5
PCL	(1)	1
PBCAE	–	–
Non-interest expense	(44)	7
Income taxes	(2)	–
Net income	(18)	(3)
Impact on EPS		
Basic	\$ (0.01)	\$ –
Diluted	(0.01)	–

The relevant average exchange rates that impact our business are shown in the following table:

	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
(Average foreign currency equivalent of C\$1.00) (1)			
U.S. dollar	0.760	0.755	0.749
British pound	0.579	0.605	0.582
Euro	0.684	0.686	0.656

(1) Average amounts are calculated using month-end spot rates for the period.

Total revenue

(Millions of Canadian dollars)	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Interest income	\$10,238	\$ 10,442	\$ 10,149
Interest expense (1)	5,017	5,331	5,302
Net interest income	\$ 5,221	\$ 5,111	\$ 4,847
NIM (1)	1.59%	1.60%	1.60%
Insurance premiums, investment and fee income	\$ 1,994	\$ 1,153	\$ 1,579
Trading revenue (1)	458	116	395
Investment management and custodial fees	1,535	1,477	1,450
Mutual fund revenue	946	932	873
Securities brokerage commissions	318	323	342
Service charges	488	493	468
Underwriting and other advisory fees	627	428	345
Foreign exchange revenue, other than trading	253	242	249
Card service revenue	287	252	282
Credit fees	360	344	315
Net gains on investment securities	11	16	46
Share of profit in joint ventures and associates	22	26	15
Other	316	457	383
Non-interest income	\$ 7,615	\$ 6,259	\$ 6,742
Total revenue	\$12,836	\$ 11,370	\$ 11,589
Additional information			
Total trading revenue			
Net interest income (1)	\$ 700	\$ 604	\$ 564
Non-interest income (1)	458	116	395
Total trading revenue	\$ 1,158	\$ 720	\$ 959

(1) Commencing Q4 2019, the interest component of the valuation of certain deposits carried at FVTPL previously presented in trading revenue is presented in net interest income. Comparative amounts have been reclassified to conform with this presentation.

Q1 2020 vs. Q1 2019

Total revenue increased \$1,247 million or 11% from last year, mainly due to an increase in insurance premiums, investment and fee income (insurance revenue) and higher net interest income. Higher underwriting and other advisory fees, as well as investment management and custodial fees also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation which decreased total revenue by \$65 million.

Net interest income increased \$374 million or 8%, largely due to volume growth in Canadian Banking and Wealth Management and higher trading revenue in Capital Markets, as well as higher revenue from our Investor & Treasury Services business, partially offset by lower spreads in Wealth Management and Canadian Banking. The impact associated with higher revenue from our Investor & Treasury Services business was more than offset by lower related gains on non-trading derivatives in Other revenue.

NIM was down 1 bp compared to last year, mainly due to changes in average earning asset mix with volume growth primarily in reverse repos, partially offset by higher revenue from our Investor & Treasury Services business. The impact associated with higher revenue from our Investor & Treasury Services business was more than offset by lower related gains on non-trading derivatives in Other revenue.

Insurance revenue increased \$415 million or 26%, mainly reflecting the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which are largely offset in PBCAE. Business growth in International Insurance also contributed to the increase. These factors were partially offset by the lower impact from reinsurance contract renegotiations.

Investment management and custodial fees increased \$85 million or 6%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales, partially offset by a favourable accounting adjustment in Wealth Management in the prior year.

Underwriting and other advisory fees increased \$282 million or 82%, largely due to higher M&A activity primarily in North America and higher debt origination largely in the U.S. Higher equity origination across all regions also contributed to the increase.

Q1 2020 vs. Q4 2019

Total revenue increased \$1,466 million or 13% from the prior quarter, primarily due to an increase in insurance revenue, trading revenue, and underwriting and other advisory fees. Higher net interest income also contributed to the increase. These factors were partially offset by lower other revenue.

Net interest income was up \$110 million or 2%, largely due to higher trading revenue in Capital Markets, and volume growth, partially offset by lower spreads in Canadian Banking and Wealth Management.

Insurance revenue increased \$841 million or 73%, mainly due to the change in fair value of investments backing our policyholder liabilities, higher group annuity sales and business growth, all of which are largely offset in PBCAE. These factors were partially offset by realized investment gains in the prior quarter and lower favourable reinsurance contract renegotiations.

Trading revenue increased \$342 million or 295%, primarily driven by higher fixed income and equity trading revenue in Capital Markets across most regions.

Underwriting and other advisory fees increased \$199 million or 46%, largely due to higher M&A activity primarily in North America.

Other revenue decreased \$141 million or 31%, mainly driven by the gain on sale of the private debt business of BlueBay in the prior quarter and lower net gains in our non-trading investment portfolios, partially offset by the change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in Non-interest expense.

Provision for credit losses

Q1 2020 vs. Q1 2019

Total PCL in Q1 2020 was \$419 million.

PCL on loans of \$421 million decreased \$95 million, or 18% from the prior year, primarily due to lower provisions in Capital Markets and Wealth Management. The PCL on loans ratio of 26 bps improved 8 bps.

Q1 2020 vs. Q4 2019

Total PCL decreased \$80 million from the prior quarter.

PCL on loans of \$421 million decreased \$84 million, or 17% from the prior quarter, due to lower provisions in Personal & Commercial Banking and Wealth Management. The PCL on loans ratio improved 6 bps.

For further details on PCL, refer to Credit quality performance in the Credit risk section.

Insurance policyholder benefits, claims and acquisition expense (PBCAE)

Q1 2020 vs. Q1 2019

PBCAE increased \$389 million or 32% from a year ago, mainly due to the change in fair value of investments backing our policyholder liabilities, higher group annuity sales, and business growth, primarily in International Insurance, all of which are largely offset in revenue. These factors were partially offset by the favourable impact of new longevity reinsurance contracts.

Q1 2020 vs. Q4 2019

PBCAE increased \$960 million from the prior quarter, mainly due to the change in fair value of investments backing our policyholder liabilities, higher group annuity sales and business growth, all of which are largely offset in revenue. The impact of longevity reinsurance contracts also contributed to the increase. These factors were partially offset by lower favourable investment-related experience.

Non-interest expense

	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
(Millions of Canadian dollars, except percentage amounts)			
Salaries	\$ 1,652	\$ 1,738	\$ 1,608
Variable compensation	1,646	1,475	1,388
Benefits and retention compensation	541	445	492
Share-based compensation	221	62	155
Human resources	\$ 4,060	\$ 3,720	\$ 3,643
Equipment	462	452	431
Occupancy	397	424	397
Communications	250	296	240
Professional fees	284	382	305
Amortization of other intangibles	303	309	290
Other	622	736	606
Non-interest expense	\$ 6,378	\$ 6,319	\$ 5,912
Efficiency ratio ⁽¹⁾	49.7%	55.6%	51.0%
Efficiency ratio adjusted ⁽²⁾	51.6%	55.4%	52.1%

(1) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.

(2) Measures have been adjusted by excluding the change in fair value of investments backing our policyholder liabilities. These are non-GAAP measures. For further details, refer to the Key performance and non-GAAP measures section.

Q1 2020 vs. Q1 2019

Non-interest expense increased \$466 million or 8%, largely due to higher variable compensation commensurate with revenue growth and an increase in technology and related costs, including digital initiatives. The change in the fair value of our U.S. share-based compensation plans, which was largely offset in other revenue, and higher staff-related costs also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Our efficiency ratio of 49.7% decreased 130 bps from 51.0% last year. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 51.6% decreased 50 bps from 52.1% last year.

Q1 2020 vs. Q4 2019

Non-interest expense increased \$59 million or 1%, mainly due to higher variable compensation on improved results and an increase in staff-related costs. The change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue, also contributed to the increase. These factors were partially offset by severance and related costs associated with the repositioning of our Investor & Treasury Services business in the prior quarter, the impact of an unfavourable accounting adjustment in Corporate Support in the prior quarter and the timing of professional fees.

Our efficiency ratio of 49.7% decreased 590 bps from 55.6% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 51.6% decreased 380 bps from 55.4% last quarter.

Efficiency ratio excluding the change in fair value of investments backing our policyholder liabilities is a non-GAAP measure. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

Income taxes

(Millions of Canadian dollars, except percentage amounts)	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Income taxes	\$ 916	\$ 692	\$ 766
Income before income taxes	\$ 4,425	\$ 3,898	\$ 3,938
Effective income tax rate	20.7%	17.8%	19.5%

Q1 2020 vs. Q1 2019

Income tax expense increased \$150 million or 20% from last year, primarily due to higher income before income taxes.

The effective income tax rate of 20.7% increased 120 bps, mainly due to a decrease in income from lower tax rate jurisdictions in the current quarter and favourable tax adjustments in the prior year. These factors were partially offset by a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados in the prior year.

Q1 2020 vs. Q4 2019

Income tax expense increased \$224 million or 32% from last quarter, primarily due to higher income before income taxes in the current quarter and higher favourable tax adjustments in the prior quarter.

The effective income tax rate of 20.7% increased 290 bps, primarily due to higher favourable tax adjustments in the prior quarter and a decrease in income from lower tax rate jurisdictions in the current quarter.

Business segment results

How we measure and report our business segments

The key methodologies and assumptions used in our management reporting framework are periodically reviewed by management to ensure they remain valid. They remain unchanged from October 31, 2019.

For further details on our key methodologies and assumptions used in our management reporting framework, refer to the How we measure and report our business segments section of our 2019 Annual Report.

Key performance and non-GAAP measures

Performance measures

Return on common equity

We measure and evaluate the performance of our consolidated operations and each business segment using a number of financial metrics, such as net income and ROE. We use ROE, at both the consolidated and business segment levels, as a measure of return on total capital invested in our business. Management views the business segment ROE measure as a useful measure for supporting investment and resource allocation decisions because it adjusts for certain items that may affect comparability between business segments and certain competitors. ROE does not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section of our 2019 Annual Report.

The following table provides a summary of our ROE calculations:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended							October 31 2019	January 31 2019
	January 31 2020								
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	\$ 1,663	\$ 610	\$ 179	\$ 140	\$ 863	\$ (16)	\$ 3,439	\$ 3,137	\$ 3,096
Total average common equity (1) (2)	23,350	15,350	2,200	3,100	22,750	11,100	77,850	76,600	73,550
ROE (3)	28.3%	15.8%	32.5%	18.0%	15.1%	n.m.	17.6%	16.2%	16.7%

(1) Total average common equity represents rounded figures.

(2) The amounts for the segments are referred to as attributed capital.

(3) ROE is based on actual balances of average common equity before rounding.
n.m. not meaningful

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results and provide readers with a better understanding of management's perspective on our performance. These measures enhance the

comparability of our financial performance for the three months ended January 31, 2020 with the corresponding period in the prior year and the three months ended October 31, 2019. Non-GAAP measures do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

The following discussion describes the non-GAAP measures we use in evaluating our operating results.

Efficiency ratio excluding the change in fair value of investments in Insurance

Our efficiency ratio is impacted by the change in fair value of investments backing our policyholder liabilities, which is reported in revenue and largely offset in PBCAE.

The following table provides calculations of our consolidated efficiency ratio excluding the change in fair value of investments backing our policyholder liabilities:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended									
	January 31 2020			October 31 2019			January 31 2019			
	Item excluded			Item excluded			Item excluded			
	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	As reported	Change in fair value of investments backing policyholder liabilities	Adjusted	
Total revenue	\$ 12,836	\$ (468)	\$ 12,368	\$ 11,370	\$ 28	\$ 11,398	\$ 11,589	\$ (247)	\$ 11,342	
Non-interest expense	6,378	–	6,378	6,319	–	6,319	5,912	–	5,912	
Efficiency ratio	49.7%		51.6%	55.6%		55.4%	51.0%		52.1%	

Personal & Commercial Banking

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Net interest income	\$ 3,226	\$ 3,238	\$ 3,134
Non-interest income	1,384	1,330	1,284
Total revenue	4,610	4,568	4,418
PCL on performing assets	66	50	35
PCL on impaired assets	276	337	313
PCL	342	387	348
Non-interest expense	1,984	2,007	1,915
Income before income taxes	2,284	2,174	2,155
Net income	\$ 1,686	\$ 1,618	\$ 1,571
Revenue by business			
Canadian Banking	\$ 4,368	\$ 4,321	\$ 4,170
Caribbean & U.S. Banking	242	247	248
Selected balance sheet and other information			
ROE	28.3%	27.0%	26.6%
NIM	2.77%	2.82%	2.84%
Efficiency ratio	43.0%	43.9%	43.3%
Operating leverage	0.7%	3.7%	(0.2)%
Average total earning assets, net	\$ 463,400	\$ 456,100	\$ 437,100
Average loans and acceptances, net	466,800	458,900	438,100
Average deposits	413,700	405,200	382,200
AUA ⁽¹⁾	294,200	283,800	268,500
Average AUA	290,600	281,800	264,000
PCL on impaired loans as a % of average net loans and acceptances	0.24%	0.29%	0.28%
Other selected information – Canadian Banking			
Net income	\$ 1,624	\$ 1,555	\$ 1,544
NIM	2.72%	2.76%	2.79%
Efficiency ratio	41.3%	42.0%	41.6%
Operating leverage	0.7%	4.3%	(0.2)%

(1) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at January 31, 2020 of \$15.4 billion and \$7.8 billion, respectively (October 31, 2019 – \$15.5 billion and \$8.1 billion; January 31, 2019 – \$16.6 billion and \$8.5 billion).

Financial performance

Q1 2020 vs. Q1 2019

Net income increased \$115 million or 7% from last year, mainly due to average volume growth of 8% in Canadian Banking and higher mutual fund distribution fees, partially offset by lower spreads and an increase in technology and related costs. The prior year also included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados.

Total revenue increased \$192 million or 4%.

Canadian Banking revenue increased \$198 million or 5% compared to last year, largely reflecting average volume growth of 7% in loans and 9% in deposits, higher balances driving higher mutual fund distribution fees and higher service charges. These factors were partially offset by lower spreads.

Caribbean & U.S. Banking revenue decreased \$6 million or 2% compared to last year.

Net interest margin was down 7 bps, mainly due to the impact of competitive pricing pressures and changes in product mix.

PCL decreased \$6 million or 2%, largely due to lower PCL on impaired assets, resulting in a decrease of 4 bps in the impaired loans ratio. This was partially offset by higher PCL on performing assets. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$69 million or 4%, primarily attributable to an increase in technology and related costs, including digital initiatives, higher staff-related costs and higher marketing costs.

Q1 2020 vs. Q4 2019

Net income increased \$68 million or 4% from last quarter, mainly due to lower PCL and higher card service revenue.

Total revenue increased \$42 million or 1% from last quarter, mainly driven by average volume growth of 2% in Canadian Banking and higher card service revenue, partially offset by lower spreads.

Net interest margin was down 5 bps, largely due to the impact of competitive pricing pressures.

PCL decreased \$45 million or 12%, largely due to lower PCL on impaired assets, resulting in a decrease of 5 bps in the impaired loans ratio. This was partially offset by higher PCL on performing assets. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense decreased \$23 million or 1%, largely reflecting the timing of professional fees and lower marketing costs, partially offset by higher staff-related costs.

Wealth Management

	As at or for the three months ended		
	January 31 2020	October 31 2019	January 31 2019
(Millions of Canadian dollars, except number of, percentage amounts and as otherwise noted)			
Net interest income	\$ 738	\$ 745	\$ 744
Non-interest income			
Fee-based revenue	1,847	1,786	1,714
Transaction and other revenue	581	656	490
Total revenue	3,166	3,187	2,948
PCL on performing assets	(1)	(1)	15
PCL on impaired assets	(1)	35	11
PCL	(2)	34	26
Non-interest expense	2,370	2,262	2,164
Income before income taxes	798	891	758
Net income	\$ 623	\$ 729	\$ 597
Revenue by business			
Canadian Wealth Management	\$ 843	\$ 823	\$ 842
U.S. Wealth Management (including City National)	1,624	1,556	1,471
U.S. Wealth Management (including City National) (US\$ millions)	1,234	1,175	1,103
Global Asset Management	594	713	543
International Wealth Management	105	95	92
Selected balance sheet and other information			
ROE	15.8%	19.5%	16.4%
NIM	3.17%	3.30%	3.67%
Pre-tax margin ⁽¹⁾	25.2%	28.0%	25.7%
Number of advisors ⁽²⁾	5,299	5,296	5,119
Average total earning assets, net	\$ 92,500	\$ 89,500	\$ 80,500
Average loans and acceptances, net	69,600	66,700	61,200
Average deposits	105,600	100,700	94,300
AUA ⁽³⁾	1,106,900	1,062,200	981,400
U.S. Wealth Management (including City National) ⁽³⁾	578,600	543,300	496,500
U.S. Wealth Management (including City National) (US\$ millions) ⁽³⁾	437,300	412,600	378,000
AUM ⁽³⁾	792,900	755,700	682,000
Average AUA	1,097,100	1,055,700	986,800
Average AUM	780,200	753,300	675,100
PCL on impaired loans as a % of average net loans and acceptances	(0.01)%	0.21%	0.07%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)

	For the three months ended	
	Q1 2020 vs. Q1 2019	Q1 2020 vs. Q4 2019
Increase (decrease):		
Total revenue	\$ (27)	\$ (2)
PCL	-	-
Non-interest expense	(21)	(3)
Net income	(4)	-
Percentage change in average U.S. dollar equivalent of C\$1.00	1%	1%
Percentage change in average British pound equivalent of C\$1.00	(1)%	(4)%
Percentage change in average Euro equivalent of C\$1.00	4%	-%

(1) Pre-tax margin is defined as Income before income taxes divided by Total revenue.

(2) Represents client-facing advisors across all our Wealth Management businesses.

(3) Represents period-end spot balances.

Financial performance

Q1 2020 vs. Q1 2019

Net income increased \$26 million or 4%, primarily due to an increase in average fee-based client assets and higher transaction volumes. These factors were partially offset by higher variable compensation commensurate with revenue growth, as well as higher technology and staff-related costs. The prior year was also impacted by a favourable accounting adjustment related to Canadian Wealth Management.

Total revenue increased \$218 million or 7%.

Canadian Wealth Management revenue increased \$1 million, primarily due to higher average fee-based client assets reflecting market appreciation and net sales, largely offset by a favourable accounting adjustment in the prior year.

U.S. Wealth Management (including City National) revenue increased \$153 million or 10%. In U.S. dollars, revenue increased \$131 million or 12%, primarily due to higher average fee-based client assets reflecting market appreciation and net sales, the change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in non-interest expense and higher transaction volumes. Higher net interest income driven by average loan growth of 17%, largely offset by lower spreads, also contributed to the increase.

Global Asset Management revenue increased \$51 million or 9%, largely due to higher average fee-based assets reflecting market appreciation and net sales.

International Wealth Management revenue increased \$13 million or 14%, largely due to higher transaction volumes and increase in net interest income driven by higher spreads.

PCL decreased \$28 million primarily in U.S. Wealth Management (including City National), reflecting lower PCL on performing assets due to unfavourable macroeconomic factors in the prior year. Lower PCL on impaired assets also contributed to the decrease, resulting in an improvement of 8 bps in the impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$206 million or 10%, primarily due to higher variable compensation commensurate with revenue growth. The change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue, higher staff-related costs in support of business growth and higher technology and related costs also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Q1 2020 vs. Q4 2019

Net income decreased \$106 million or 15%, mainly due to the gain on sale of the private debt business of BlueBay in the prior quarter.

Total revenue decreased \$21 million or 1%, as the change in the fair value of the hedges related to our U.S. share-based compensation plans, which was largely offset in non-interest expense, higher average fee-based client assets reflecting market appreciation and net sales, and an increase in transaction volumes were more than offset by the gain on sale of the private debt business of BlueBay in the prior quarter.

PCL decreased \$36 million, reflecting lower provisions on impaired assets in U.S. Wealth Management (including City National) driving a decrease of 22 bps in the impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$108 million or 5%, primarily due to higher staff-related costs, and the change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue.

Insurance

	As at or for the three months ended		
	January 31 2020	October 31 2019	January 31 2019
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Non-interest income			
Net earned premiums	\$ 1,350	\$ 944	\$ 1,162
Investment income (1)	609	168	381
Fee income	35	41	36
Total revenue	1,994	1,153	1,579
Insurance policyholder benefits and claims (1)	1,535	572	1,129
Insurance policyholder acquisition expense	79	82	96
Non-interest expense	153	153	154
Income before income taxes	227	346	200
Net income	\$ 181	\$ 282	\$ 166
Revenue by business			
Canadian Insurance	\$ 1,383	\$ 609	\$ 1,039
International Insurance	611	544	540
Selected balances and other information			
ROE	32.5%	50.3%	34.7%
Premiums and deposits (2)	\$ 1,542	\$ 1,105	\$ 1,314
Fair value changes on investments backing policyholder liabilities (1)	468	(28)	247

(1) Investment income can experience volatility arising from fluctuation of assets designated as FVTPL. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in Insurance policyholder benefits, claims and acquisition expense.

(2) Premiums and deposits include premiums on risk-based insurance and annuity products, and individual and group segregated fund deposits, consistent with insurance industry practices.

Financial performance

Q1 2020 vs. Q1 2019

Net income increased \$15 million or 9% from a year ago, mainly due to new longevity reinsurance contracts, partially offset by the lower impact from reinsurance contract renegotiations.

Total revenue increased \$415 million or 26%.

Canadian Insurance revenue increased \$344 million or 33%, primarily due to the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which are largely offset in PBCAE as indicated below.

International Insurance revenue increased \$71 million or 13%, mainly due to business growth, primarily in longevity reinsurance, which is largely offset in PBCAE as indicated below. This factor was, partially offset by the lower impact from reinsurance contract renegotiations.

PBCAE increased \$389 million or 32%, mainly due to the change in fair value of investments backing our policyholder liabilities, higher group annuity sales, and business growth, primarily in International Insurance, partially offset by the favourable impact of new longevity reinsurance contracts.

Non-interest expense decreased \$1 million or 1%.

Q1 2020 vs. Q4 2019

Net income decreased \$101 million or 36%, primarily due to the impact of lower favourable investment-related experience, new longevity reinsurance contracts and reinsurance contract renegotiations.

Total revenue increased \$841 million or 73%, mainly due to the change in fair value of investments backing our policyholder liabilities, higher group annuity sales and business growth, all of which are largely offset in PBCAE as indicated below. These factors were partially offset by realized investment gains in the prior quarter and lower favourable reinsurance contract renegotiations.

PBCAE increased \$960 million, mainly due to the change in fair value of investments backing our policyholder liabilities and higher group annuity sales. Business growth and the impact of new longevity reinsurance contracts also contributed to the increase. These factors were partially offset by lower favourable investment-related experience.

Non-interest expense remained consistent with prior quarter.

Investor & Treasury Services

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Net interest income	\$ 58	\$ 37	\$ (31)
Non-interest income	539	529	662
Total revenue	597	566	631
PCL	–	(1)	–
Non-interest expense	402	508	418
Net income before income taxes	195	59	213
Net income	\$ 143	\$ 45	\$ 161
Selected balance sheet and other information			
ROE	18.0%	4.8%	17.3%
Average deposits	\$ 174,500	\$ 175,200	\$ 171,900
Average client deposits	57,900	57,600	59,200
Average wholesale funding deposits	116,600	117,600	112,700
AUA ⁽¹⁾	4,308,200	4,318,100	4,100,900
Average AUA	4,286,200	4,296,300	4,191,300

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)

	For the three months ended	
	Q1 2020 vs. Q1 2019	Q1 2020 vs. Q4 2019
Increase (decrease):		
Total revenue	\$ (8)	\$ 3
Non-interest expense	(7)	3
Net income	–	–
Percentage change in average U.S. dollar equivalent of C\$1.00	1%	1%
Percentage change in average British pound equivalent of C\$1.00	(1)%	(4)%
Percentage change in average Euro equivalent of C\$1.00	4%	–%

(1) Represents period-end spot balances.

Financial performance**Q1 2020 vs. Q1 2019**

Net income decreased \$18 million or 11%, primarily due to lower client deposit margins and lower revenue from our asset services business.

Total revenue decreased \$34 million or 5%, mainly due to lower client deposit revenue largely driven by margin compression reflecting spread tightening and the impact of foreign exchange translation. Lower revenue from our asset services business due to reduced client activity also contributed to the decrease.

Non-interest expense decreased \$16 million or 4%, primarily driven by the impact of foreign exchange translation and lower staff related costs largely benefitting from investment in technology initiatives.

Q1 2020 vs. Q4 2019

Net income increased \$98 million, primarily due to severance and related costs associated with the repositioning of the business in the prior quarter.

Total revenue increased \$31 million or 5%, mainly due to higher funding and liquidity revenue driven by money market opportunities in the current quarter.

Non-interest expense decreased \$106 million or 21%, largely driven by severance and related costs associated with the repositioning of the business in the prior quarter, partially offset by annual regulatory costs in the current quarter.

Capital Markets

	As at or for the three months ended		
	January 31 2020	October 31 2019	January 31 2019
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Net interest income (1) (2)	\$ 1,161	\$ 1,063	\$ 969
Non-interest income (1) (2)	1,387	924	1,129
Total revenue (1)	2,548	1,987	2,098
PCL on performing assets	18	18	38
PCL on impaired assets	61	60	102
PCL	79	78	140
Non-interest expense	1,435	1,308	1,230
Net income before income taxes	1,034	601	728
Net income	\$ 882	\$ 584	\$ 653
Revenue by business			
Corporate and Investment Banking	\$ 1,141	\$ 934	\$ 927
Global Markets	1,450	1,095	1,227
Other	(43)	(42)	(56)
Selected balance sheet and other information			
ROE	15.1%	10.0%	10.8%
Average total assets	\$ 716,000	\$ 696,100	\$ 643,700
Average trading securities	115,700	103,800	102,100
Average loans and acceptances, net	99,300	98,100	98,400
Average deposits (2)	76,500	76,800	78,100
PCL on impaired loans as a % of average net loans and acceptances	0.24%	0.24%	0.41%

(1) The taxable equivalent basis (teb) adjustment for the three months ended January 31, 2020 was \$128 million (October 31, 2019 – \$112 million; January 31, 2019 – \$107 million). For further discussion, refer to the How we measure and report our business segments section of our 2019 Annual Report.

(2) Commencing Q4 2019, the interest component and the accrued interest payable recorded on certain deposits carried at FVTPL previously presented in trading revenue and deposits, respectively, are presented in net interest income and other liabilities, respectively. Comparative amounts have been reclassified to conform with this presentation.

Financial performance

Q1 2020 vs. Q1 2019

Net income increased \$229 million or 35%, primarily due to higher revenue in Global Markets and Corporate and Investment Banking, as well as lower PCL. These factors were partially offset by higher compensation on improved results and a higher effective tax rate, largely reflecting changes in earnings mix.

Total revenue increased \$450 million or 21%.

Corporate and Investment Banking revenue increased \$214 million or 23%, mainly due to higher M&A activity primarily in North America and higher debt origination largely in the U.S. as the prior year was impacted by challenging market conditions.

Global Markets revenue increased \$223 million or 18%, mainly driven by higher fixed income trading revenue across all regions due to more favourable market conditions in the current quarter and increased client activity, partially offset by lower equity trading revenue primarily in the U.S.

Other revenue increased \$13 million largely reflecting lower residual funding costs.

PCL decreased \$61 million or 44%, largely due to lower PCL on impaired assets. The PCL on impaired loans ratio decreased 17 bps, mainly due to lower provisions taken in the current year. Lower PCL on performing assets also contributed to the decrease. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$205 million or 17%, mainly due to higher compensation on improved results.

Q1 2020 vs. Q4 2019

Net income increased \$298 million or 51%, primarily due to higher revenue in Global Markets and Corporate and Investment Banking. These factors were partially offset by higher compensation on improved results and a higher effective tax rate, largely reflecting changes in earnings mix.

Total revenue increased \$561 million or 28%, mainly due to higher fixed income trading revenue across most regions and higher M&A activity primarily in North America. Higher equity trading revenue across most regions also contributed to the increase.

PCL increased \$1 million and the PCL on impaired loans ratio remained flat.

Non-interest expense increased \$127 million or 10%, mainly due to higher compensation on improved results.

Corporate Support

(Millions of Canadian dollars)	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Net interest income (loss) (1)	\$ 38	\$ 28	\$ 31
Non-interest income (loss) (1)	(117)	(119)	(116)
Total revenue (1)	(79)	(91)	(85)
PCL	—	1	—
Non-interest expense	34	81	31
Net income (loss) before income taxes (1)	(113)	(173)	(116)
Income taxes (recoveries) (1)	(107)	(121)	(140)
Net income (loss)	\$ (6)	\$ (52)	\$ 24

(1) Teb adjusted.

Due to the nature of activities and consolidation adjustments reported in this segment, we believe that a comparative period analysis is not relevant. The following identifies material items affecting the reported results in each period.

Total revenue and income taxes (recoveries) in each period in Corporate Support include the deduction of the teb adjustments related to the gross-up of income from Canadian taxable corporate dividends and the U.S. tax credit investment business recorded in Capital Markets. The amount deducted from revenue was offset by an equivalent increase in income taxes (recoveries).

The teb amount for the three months ended January 31, 2020 was \$128 million, as compared to \$112 million in the prior quarter and \$107 million last year.

The following identifies the material items, other than the teb impacts noted previously, affecting the reported results in each period.

Q1 2020

Net loss was \$6 million, largely reflecting residual unallocated costs and net unfavourable tax adjustments, partially offset by asset/liability management activities.

Q4 2019

Net loss was \$52 million, largely due to the impact of an unfavourable accounting adjustment.

Q1 2019

Net income was \$24 million, largely reflecting net favourable tax adjustments.

Quarterly results and trend analysis

Our quarterly results are impacted by a number of trends and recurring factors, which include seasonality of certain businesses, general economic and market conditions, and fluctuations in the Canadian dollar relative to other currencies. The following table summarizes our results for the last eight quarters (the period):

Quarterly results (1)

(Millions of Canadian dollars, except per share and percentage amounts)	2020	2019				2018		
	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Q2
Personal & Commercial Banking	\$ 4,610	\$ 4,568	\$ 4,546	\$ 4,333	\$ 4,418	\$ 4,364	\$ 4,284	\$ 4,103
Wealth Management	3,166	3,187	3,029	2,979	2,948	2,740	2,798	2,605
Insurance	1,994	1,153	1,463	1,515	1,579	1,039	1,290	806
Investor & Treasury Services	597	566	561	587	631	624	620	671
Capital Markets (2)	2,548	1,987	2,034	2,169	2,098	2,056	2,157	2,010
Corporate Support (2)	(79)	(91)	(89)	(84)	(85)	(154)	(124)	(141)
Total revenue	\$ 12,836	\$ 11,370	\$ 11,544	\$ 11,499	\$ 11,589	\$ 10,669	\$ 11,025	\$ 10,054
PCL	419	499	425	426	514	353	346	274
PBCAE	1,614	654	1,046	1,160	1,225	494	925	421
Non-interest expense	6,378	6,319	5,992	5,916	5,912	5,882	5,858	5,482
Income before income taxes	\$ 4,425	\$ 3,898	\$ 4,081	\$ 3,997	\$ 3,938	\$ 3,940	\$ 3,896	\$ 3,877
Income taxes	916	692	818	767	766	690	787	817
Net income	\$ 3,509	\$ 3,206	\$ 3,263	\$ 3,230	\$ 3,172	\$ 3,250	\$ 3,109	\$ 3,060
EPS – basic	\$ 2.41	\$ 2.19	\$ 2.23	\$ 2.20	\$ 2.15	\$ 2.21	\$ 2.10	\$ 2.06
– diluted	2.40	2.18	2.22	2.20	2.15	2.20	2.10	2.06
Effective income tax rate	20.7%	17.8%	20.0%	19.2%	19.5%	17.5%	20.2%	21.1%
Period average US\$ equivalent of C\$1.00	\$ 0.760	\$ 0.755	\$ 0.754	\$ 0.751	\$ 0.749	\$ 0.767	\$ 0.767	\$ 0.778

(1) Fluctuations in the Canadian dollar relative to other foreign currencies have affected our consolidated results over the period.

(2) Teb adjusted. For further discussion, refer to the How we measure and report our business segments section our 2019 Annual Report.

Seasonality

Seasonal factors may impact our results in certain quarters. The first quarter has historically been stronger for our Capital Markets businesses. The second quarter has fewer days than the other quarters, which generally results in a decrease in net interest income and certain expense items. The third and fourth quarters include the summer months which results in lower client activity and may negatively impact the results of our Capital Markets brokerage business.

Trend analysis

Earnings have generally trended upward over the period. However, results in the first quarter of 2019 were impacted by challenging market conditions throughout the earlier part of the quarter. Quarterly earnings are also affected by the impact of foreign exchange translation.

Personal & Commercial Banking revenue has benefitted from solid volume growth since the beginning of the period. Higher spreads throughout 2018 and the early half of 2019 reflecting higher interest rates have been partially offset by the ongoing impact of competitive pricing pressures. Overall, however, market interest rates have moderated in the latter part of the period.

Wealth Management revenue has generally trended upwards primarily due to growth in average fee-based client assets which benefitted from market appreciation and net sales. Net interest income has also increased throughout the majority of the period largely driven by volume growth across the period and the impact of higher interest rates throughout the earlier part of the period. The impact of the U.S. Fed rate cuts resulted in lower spreads throughout the latter part of the period. A gain on the sale of the private debt business of BlueBay contributed to the increase in the fourth quarter of 2019. The change in the fair value of the hedges related to our U.S. share-based compensation plans, which is largely offset in Non-interest expense, also contributed to fluctuations in revenue over the period.

Insurance revenue fluctuated over the period, primarily due to the impact of changes in the fair value of investments backing our policyholder liabilities. Revenue has benefitted from business growth in Canadian and International Insurance over the majority of the period, with the exception of lower group annuity sales impacting the fourth quarter of 2019.

Investor & Treasury Services revenue has been impacted by fluctuations in market conditions and client activity across the period. The second quarter of 2018 trended higher due to generally higher market volatility, increased client activity and higher client deposit margins. Revenue from our funding and liquidity business was impacted by reduced money market opportunities in the first quarter of 2019. During the first half of 2019 our asset services business was impacted by challenging market conditions. The latter half of the period was impacted by lower client activity and lower client deposit margins.

Capital Markets revenue is influenced, to a large extent, by market conditions that impact client activity in our Corporate and Investment Banking and Global Markets businesses, with the first quarter results generally stronger than the remaining quarters. The second quarter of 2018 experienced lower equity originations driven by lower market activity, decreased fixed income trading across all regions, and lower equity trading revenue in the U.S. The decline experienced in the fourth quarter of 2018 largely resulted from lower fixed income trading revenue. Client activity in 2019 was impacted by challenging market conditions resulting in lower investment banking fee revenues experienced across the industry. The impact of challenging market conditions also resulted in lower equity trading revenue in the second half of 2019. The first quarter of 2020 saw more favourable market conditions and increased client activity resulting in higher fixed income trading revenue and M&A activity.

PCL on performing assets has fluctuated over the period as it is impacted by volume growth, changes in credit quality, model changes and macroeconomic conditions. PCL on impaired assets saw lower provisions and higher recoveries across a few sectors for the majority of 2018, although the fourth quarter was impacted by the restructuring of portfolios in Barbados. After relatively benign credit conditions in 2018, we returned to a more normalized level of credit losses towards the end of 2019, though the first quarter of 2020 saw lower provisions on impaired loans in Personal & Commercial Banking and Wealth Management.

PBCAE has fluctuated quarterly as it includes the changes to the fair value of investments backing our policyholder liabilities and business growth, including the impact of group annuity sales, both of which are largely offset in Revenue. PBCAE has also fluctuated due to investment-related experience and claims costs over the period. Since late 2018, PBCAE has been positively impacted by favourable reinsurance contract renegotiations. Actuarial adjustments, which generally occur in the fourth quarter of each year, also impact PBCAE results.

While we continue to focus on efficiency management activities, Non-interest expense trended upwards over the period. Growth mainly reflects higher costs in support of business growth and our ongoing investments in technology and related costs, including digital initiatives, and higher staff-related costs, including variable compensation. The increase in the fourth quarter of 2019 reflected severance and related costs associated with repositioning of our Investor & Treasury Services business.

Our effective income tax rate has fluctuated over the period, mostly due to various levels of tax adjustments and changes in earnings mix. The first quarter of 2019 included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados.

Financial condition

Condensed balance sheets

(Millions of Canadian dollars)	As at	
	January 31 2020	October 31 2019
Assets		
Cash and due from banks	\$ 34,120	\$ 26,310
Interest-bearing deposits with banks	31,331	38,345
Securities, net of applicable allowance (1)	266,667	249,004
Assets purchased under reverse repurchase agreements and securities borrowed	324,187	306,961
Loans		
Retail	430,841	426,086
Wholesale	202,238	195,870
Allowance for loan losses	(3,139)	(3,100)
Other – Derivatives	93,982	101,560
– Other (2)	96,077	87,899
Total assets	\$ 1,476,304	\$ 1,428,935
Liabilities		
Deposits	\$ 902,284	\$ 886,005
Other – Derivatives	94,611	98,543
– Other (2)	386,079	350,947
Subordinated debentures	9,269	9,815
Total liabilities	1,392,243	1,345,310
Equity attributable to shareholders	83,955	83,523
Non-controlling interests	106	102
Total equity	84,061	83,625
Total liabilities and equity	\$ 1,476,304	\$ 1,428,935

(1) Securities are comprised of Trading and Investment securities.

(2) Other – Other assets and liabilities include Segregated fund net assets and liabilities, respectively.

Q1 2020 vs. Q4 2019

Total assets increased \$47 billion or 3% from last quarter. Foreign exchange translation increased total assets by \$6 billion.

Cash and due from banks was up \$8 billion or 30%, primarily due to higher deposits with central banks, reflecting our short-term cash and liquidity management activities.

Interest-bearing deposits with banks decreased \$7 billion or 18%, due to lower deposits with central banks, reflecting our cash management and liquidity activities.

Securities, net of applicable allowance, were up \$18 billion or 7%, largely due to higher government debt and corporate debt securities, primarily driven by our liquidity management activities. Higher equity trading securities, reflecting favourable market conditions, also contributed to the increase.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$17 billion or 6%, mainly attributable to increased client activities and lower financial netting, partially offset by our liquidity management activities.

Loans (net of Allowance for loan losses) were up \$11 billion or 2%, primarily due to volume growth, driven by higher residential mortgages and wholesale loans.

Derivative assets were down \$8 billion or 7%, mainly attributable to lower fair values on foreign exchange contracts partially offset by the impact of foreign exchange translation.

Other assets were up \$8 billion or 9%, largely due to an increase in premises and equipment as a result of adopting IFRS 16. Higher customers' liability under acceptances, driven by client demand, also contributed to the increase.

Total liabilities increased \$47 billion or 3%. Foreign exchange translation increased total liabilities by \$6 billion.

Deposits increased \$16 billion or 2%, due to an increase in retail deposits, driven by client activities. Higher issuances of fixed term notes driven by funding requirements also contributed to the increase.

Derivative liabilities were down \$4 billion or 4%, primarily attributable to lower fair values on foreign exchange contracts, partially offset by the impact of foreign exchange translation and higher fair values on commodity derivative contracts.

Other liabilities increased \$35 billion or 10%, mainly due to higher obligations related to repurchase agreements due to increased client activity and lower financial netting. Higher lease liabilities as a result of adopting IFRS 16 also contributed to the increase.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with structured entities and may also include the issuance of guarantees. These transactions give rise to, among other risks, varying degrees of market, credit,

and liquidity and funding risk, which are discussed in the Risk management section of this Q1 2020 Report to Shareholders. Our significant off-balance sheet transactions include those described on pages 45 to 47 of our 2019 Annual Report.

Risk management

Credit risk

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations on a timely basis. Credit risk may arise directly from the risk of default of a primary obligor, indirectly from a secondary obligor, through off-balance sheet exposures, contingent credit risk and/or transactional risk.

Our Credit Risk Framework (CRF) and supporting credit policies are designed to clearly define roles and responsibilities, acceptable practices, limits and key controls. There have been no material changes to our CRF as described in our 2019 Annual Report.

Credit risk exposure by portfolio, sector and geography

The following table presents our credit risk exposures under the Basel regulatory defined classes and reflects exposures at default (EAD). The classification of our sectors aligns with our view of credit risk by industry.

	As at						
	January 31 2020						October 31 2019
	Credit risk (1)			Counterparty credit risk (2)			
	On-balance sheet amount	Off-balance sheet amount (3)		Repo-style transactions	Derivatives	Total exposure	Total exposure
(Millions of Canadian dollars)		Undrawn	Other (4)				
Retail							
Residential secured (5)	\$ 319,702	\$ 83,450	\$ –	\$ –	\$ –	\$ 403,152	\$ 380,872
Qualifying revolving (6)	26,763	64,893	–	–	–	91,656	100,364
Other retail	62,431	12,853	69	–	–	75,353	75,094
Total retail	\$ 408,896	\$161,196	\$ 69	\$ –	\$ –	\$ 570,161	\$ 556,330
Wholesale							
Agriculture	\$ 9,309	\$ 1,755	\$ 49	\$ –	\$ 85	\$ 11,198	\$ 10,953
Automotive	9,948	6,742	288	–	971	17,949	18,215
Banking	36,104	1,963	586	46,870	20,707	106,230	112,425
Consumer discretionary	15,243	8,815	566	–	563	25,187	25,912
Consumer staples	5,509	6,992	516	–	1,110	14,127	15,523
Oil & gas	7,701	10,522	1,422	–	1,516	21,161	21,767
Financial services	28,729	20,529	2,861	121,807	19,355	193,281	188,893
Financing products	2,886	845	518	165	715	5,129	3,258
Forest products	1,592	677	107	–	35	2,411	2,280
Governments	140,065	5,614	1,390	9,768	6,216	163,053	130,005
Industrial products	7,778	7,751	621	–	634	16,784	17,239
Information technology	6,609	5,462	244	22	1,966	14,303	12,901
Investments	17,032	2,785	406	11	287	20,521	19,945
Mining & metals	1,871	3,809	859	–	294	6,833	7,012
Public works & infrastructure	1,581	1,904	367	–	211	4,063	4,096
Real estate & related	64,739	13,048	1,329	–	970	80,086	75,652
Other services	25,501	11,814	988	8	1,592	39,903	40,167
Telecommunication & media	5,071	9,060	95	–	2,250	16,476	16,481
Transportation	5,878	5,652	1,991	–	1,919	15,440	15,932
Utilities	8,696	16,840	4,128	–	4,064	33,728	36,035
Other sectors	1,506	317	2	27	19,927	21,779	21,973
Total wholesale	\$ 403,348	\$142,896	\$19,333	\$178,678	\$85,387	\$ 829,642	\$ 796,664
Total exposure (7)	\$ 812,244	\$304,092	\$19,402	\$178,678	\$ 85,387	\$1,399,803	\$1,352,994
By geography (8)							
Canada	\$ 559,439	\$232,987	\$10,027	\$ 67,920	\$41,801	\$ 912,174	\$ 888,839
U.S.	165,668	52,967	8,099	53,249	17,428	297,411	289,330
Europe	49,760	15,496	1,140	45,730	21,250	133,376	123,891
Other International	37,377	2,642	136	11,779	4,908	56,842	50,934
Total exposure (7)	\$ 812,244	\$304,092	\$19,402	\$178,678	\$85,387	\$1,399,803	\$1,352,994

(1) EAD for standardized exposures are reported net of allowance for impaired assets and EAD for internal ratings based exposures are reported gross of all allowance for credit losses and partial write-offs as per regulatory definitions.

(2) Counterparty credit risk EAD reflects exposure amounts after netting. Collateral is included in EAD for repo-style transactions to the extent allowed by regulatory guidelines.

(3) EAD for undrawn credit commitments and other off-balance sheet amounts are reported after the application of credit conversion factors.

(4) Includes other off-balance sheet exposures such as letters of credit and guarantees.

(5) Includes residential mortgages and home equity lines of credit.

(6) Includes credit cards, unsecured lines of credit and overdraft protection products.

(7) Excludes securitization, banking book equities and other assets not subject to the standardized or internal ratings based approach.

(8) Geographic profile is based on the country of residence of the borrower.

Q1 2020 vs. Q4 2019

Total credit risk exposure increased \$47 billion or 3% from the prior quarter, largely due to an increase in securities and volume growth in loans and acceptances.

Retail exposure increased \$14 billion or 2%, driven by volume growth in the residential secured portfolio, partially offset by a decrease in the qualifying revolving portfolio.

Wholesale exposure increased \$33 billion or 4%, primarily due to an increase in securities, higher repo-style transactions and derivatives.

The geographic mix of our credit risk exposure remained largely consistent to the prior quarter. Our exposure in Canada, the U.S., Europe and Other International was 65%, 21%, 10% and 4%, respectively (October 31, 2019 – 66%, 21%, 9% and 4%, respectively).

Net European exposure by country, asset type and client type (1), (2)

	As at								
	January 31 2020								October 31 2019
	Asset type				Client type				
(Millions of Canadian dollars)	Loans Outstanding	Securities (3)	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate	Total	Total
U.K.	\$ 9,183	\$ 15,131	\$ 402	\$ 4,313	\$13,181	\$ 6,830	\$ 9,018	\$29,029	\$ 23,487
Germany	2,273	5,967	3	349	4,491	1,338	2,763	8,592	7,227
France	1,097	9,225	33	204	1,400	8,340	819	10,559	9,211
Total U.K., Germany, France	\$ 12,553	\$ 30,323	\$ 438	\$ 4,866	\$19,072	\$16,508	\$12,600	\$48,180	\$ 39,925
Ireland	\$ 775	\$ 50	\$ 492	\$ 51	\$ 759	\$ 1	\$ 608	\$ 1,368	\$ 1,467
Italy	106	384	—	7	68	353	76	497	821
Portugal	—	13	35	—	48	—	—	48	67
Spain	305	174	1	45	156	—	369	525	520
Total peripheral	\$ 1,186	\$ 621	\$ 528	\$ 103	\$ 1,031	\$ 354	\$ 1,053	\$ 2,438	\$ 2,875
Luxembourg	\$ 2,702	\$ 8,004	\$ 94	\$ 44	\$ 1,703	\$ 7,520	\$ 1,621	\$10,844	\$ 11,723
Netherlands	1,191	1,010	49	400	981	—	1,669	2,650	2,250
Norway	133	1,985	27	40	1,872	119	194	2,185	2,553
Sweden	281	2,714	17	36	1,593	1,100	355	3,048	2,225
Switzerland	990	3,083	123	185	719	2,701	961	4,381	5,308
Other	1,809	2,331	196	162	1,567	1,312	1,619	4,498	4,818
Total other Europe	\$ 7,106	\$ 19,127	\$ 506	\$ 867	\$ 8,435	\$12,752	\$ 6,419	\$27,606	\$ 28,877
Net exposure to Europe (4), (5)	\$ 20,845	\$ 50,071	\$ 1,472	\$ 5,836	\$28,538	\$29,614	\$20,072	\$78,224	\$ 71,677

(1) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.

(2) Exposures are calculated on a fair value basis and net of collateral, which includes \$157.6 billion against repo-style transactions (October 31, 2019 – \$120.5 billion) and \$10.2 billion against derivatives (October 31, 2019 – \$11.4 billion).

(3) Securities include \$8.7 billion of trading securities (October 31, 2019 – \$9.4 billion), \$27.6 billion of deposits (October 31, 2019 – \$22.5 billion), and \$13.7 billion of debt securities carried at fair value through other comprehensive income (FVOCI) (October 31, 2019 – \$12.9 billion).

(4) Excludes \$2.5 billion (October 31, 2019 – \$1.5 billion) of exposures to supranational agencies, predominantly in Luxembourg.

(5) Reflects \$2.6 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (October 31, 2019 – \$1.0 billion).

Q1 2020 vs. Q4 2019

Net credit risk exposure to Europe increased \$6.5 billion from last quarter, mainly driven by higher deposits with central banks, largely in the United Kingdom and France.

Our European corporate loan book is managed on a global basis with underwriting standards reflecting the same approach to the use of our balance sheet as we have applied in both Canada and the U.S. PCL on loans during the quarter was \$23 million. The gross impaired loans ratio of this loan book was 61 bps, up 17 bps from last quarter, mainly in the oil & gas sector.

Residential mortgages and home equity lines of credit (insured vs. uninsured)

Residential mortgages and home equity lines of credit are secured by residential properties. The following table presents a breakdown by geographic region.

(Millions of Canadian dollars, except percentage amounts)	As at January 31, 2020					
	Residential mortgages					Home equity lines of credit
	Insured (1)		Uninsured		Total	Total
Region (2)						
Canada						
Atlantic provinces	\$ 7,658	51%	\$ 7,352	49%	\$ 15,010	\$ 1,795
Quebec	12,120	35	22,894	65	35,014	3,387
Ontario	35,339	27	97,354	73	132,693	16,173
Alberta	20,474	53	18,452	47	38,926	6,152
Saskatchewan and Manitoba	8,842	49	9,335	51	18,177	2,286
B.C. and territories	14,370	27	38,972	73	53,342	8,018
Total Canada (3)	\$ 98,803	34%	\$ 194,359	66%	\$ 293,162	\$ 37,811
U.S. (4)	–	–	18,098	100	18,098	1,644
Other International (4)	6	–	2,938	100	2,944	1,366
Total International	\$ 6	–%	\$ 21,036	100%	\$ 21,042	\$ 3,010
Total	\$ 98,809	31%	\$ 215,395	69%	\$ 314,204	\$ 40,821

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2019					
	Residential mortgages					Home equity lines of credit
	Insured (1)		Uninsured		Total	Total
Region (2)						
Canada						
Atlantic provinces	\$ 7,715	52%	\$ 7,169	48%	\$ 14,884	\$ 1,838
Quebec	12,385	36	22,091	64	34,476	3,512
Ontario	36,195	28	92,947	72	129,142	16,585
Alberta	20,688	53	18,143	47	38,831	6,324
Saskatchewan and Manitoba	8,951	49	9,238	51	18,189	2,363
B.C. and territories	14,711	28	37,534	72	52,245	8,267
Total Canada (3)	\$ 100,645	35%	\$ 187,122	65%	\$ 287,767	\$ 38,889
U.S. (4)	1	–	17,011	100	17,012	1,652
Other International (4)	5	–	3,307	100	3,312	1,373
Total International	\$ 6	–%	\$ 20,318	100%	\$ 20,324	\$ 3,025
Total	\$ 100,651	33%	\$ 207,440	67%	\$ 308,091	\$ 41,914

- (1) Insured residential mortgages are mortgages whereby our exposure to default is mitigated by insurance through the Canada Mortgage and Housing Corporation (CMHC) or other private mortgage default insurers.
- (2) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
- (3) Total consolidated residential mortgages in Canada of \$293 billion (October 31, 2019 – \$288 billion) was largely comprised of \$268 billion (October 31, 2019 – \$263 billion) of residential mortgages and \$7 billion (October 31, 2019 – \$7 billion) of mortgages with commercial clients, of which \$4 billion (October 31, 2019 – \$4 billion) are insured mortgages, both in Canadian Banking, and \$18 billion (October 31, 2019 – \$18 billion) of residential mortgages in Capital Markets held for securitization purposes.
- (4) Home equity lines of credit include term loans collateralized by residential mortgages.

Home equity lines of credit are uninsured and reported within the personal loan category. As at January 31, 2020, home equity lines of credit in Canadian Banking were \$38 billion (October 31, 2019 – \$39 billion).

Residential mortgages portfolio by amortization period

The following table provides a summary of the percentage of residential mortgages that fall within the remaining amortization periods based upon current customer payment amounts, which incorporate payments larger than the minimum contractual amount and/or higher frequency of payments.

	As at					
	January 31 2020			October 31 2019		
	Canada	U.S. and other International	Total	Canada	U.S. and other International	Total
Amortization period						
≤ 25 years	72%	36%	69%	72%	38%	70%
> 25 years ≤ 30 years	24	64	27	24	62	26
> 30 years ≤ 35 years	3	–	3	3	–	3
> 35 years	1	–	1	1	–	1
Total	100%	100%	100%	100%	100%	100%

Average loan-to-value (LTV) ratios

The following table provides a summary of our average LTV ratio for newly originated and acquired uninsured residential mortgages and Homeline products by geographic region.

	For the three months ended			
	January 31 2020		October 31 2019	
	Uninsured		Uninsured	
	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)
Region (3)				
Atlantic provinces	74%	74%	74%	74%
Quebec	72	73	72	73
Ontario	71	67	71	68
Alberta	72	71	73	72
Saskatchewan and Manitoba	74	75	74	75
B.C. and territories	68	65	69	65
U.S.	73	n.m.	74	n.m.
Other International	71	n.m.	71	n.m.
Average of newly originated and acquired for the period (4) (5)	71%	68%	71%	69%
Total Canadian Banking residential mortgages portfolio (6)	58%	50%	57%	50%

(1) Residential mortgages exclude residential mortgages within the Homeline products.

(2) Homeline products are comprised of both residential mortgages and home equity lines of credit.

(3) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.

(4) The average LTV ratio for newly originated and acquired uninsured residential mortgages and Homeline products is calculated on a weighted basis by mortgage amounts at origination.

(5) For newly originated mortgages and Homeline products, LTV is calculated based on the total facility amount for the residential mortgage and Homeline product divided by the value of the related residential property.

(6) Weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index.

n.m. not meaningful

Credit quality performance

The following credit quality performance tables and analysis provide information on loans, which represents loans, acceptances and commitments, and other financial assets.

Provision for credit losses

(Millions of Canadian dollars, except percentage amounts)	For the three months ended		
	January 31 2020	October 31 2019	January 31 2019
Personal & Commercial Banking	\$ 343	\$ 393	\$ 347
Wealth Management	(2)	34	26
Capital Markets	80	78	143
Corporate Support and other	—	—	—
PCL – Loans	\$ 421	\$ 505	\$ 516
PCL – Other financial assets	(2)	(6)	(2)
Total PCL	\$ 419	\$ 499	\$ 514
PCL on loans is comprised of:			
Retail	\$ 34	\$ 47	\$ 33
Wholesale	49	24	60
PCL on performing loans	\$ 83	\$ 71	\$ 93
Retail	\$ 271	\$ 290	\$ 269
Wholesale	67	144	154
PCL on impaired loans	\$ 338	\$ 434	\$ 423
PCL – Loans	\$ 421	\$ 505	\$ 516
PCL on loans as a % of average net loans and acceptances	0.26%	0.32%	0.34%
PCL on impaired loans as a % of average net loans and acceptances	0.21%	0.27%	0.28%

Additional information by geography ⁽¹⁾

Canada			
Residential mortgages	\$ 10	\$ 9	\$ 10
Personal	129	133	121
Credit cards	137	139	116
Small business	12	11	5
Retail	288	292	252
Wholesale	6	76	41
PCL on impaired loans	\$ 294	\$ 368	\$ 293
U.S.			
Retail	\$ (2)	\$ 5	\$ 2
Wholesale	55	49	110
PCL on impaired loans	\$ 53	\$ 54	\$ 112
Other International			
Retail	\$ (15)	\$ (7)	\$ 15
Wholesale	6	19	3
PCL on impaired loans	\$ (9)	\$ 12	\$ 18
PCL on impaired loans	\$ 338	\$ 434	\$ 423

(1) Geographic information is based on residence of borrower.

Q1 2020 vs. Q1 2019

Total PCL was \$419 million. PCL on loans of \$421 million decreased \$95 million, or 18% from the prior year, primarily due to lower provisions in Capital Markets and Wealth Management. The PCL on loans ratio of 26 bps decreased 8 bps.

PCL on performing loans of \$83 million decreased \$10 million, reflecting lower provisions in Capital Markets and Wealth Management, largely offset by higher provisions in Personal & Commercial Banking.

PCL on impaired loans of \$338 million decreased \$85 million, due to lower provisions in Capital Markets, Personal & Commercial Banking and Wealth Management.

PCL on loans in Personal & Commercial Banking decreased \$4 million or 1%, reflecting lower provisions on impaired loans in our Caribbean Banking and Canadian Banking commercial portfolios, partially offset by higher provisions on impaired loans in our Canadian Banking retail portfolios. This was mainly offset by higher provisions on performing loans, largely due to unfavourable changes in credit quality, mainly in our Canadian Banking portfolios.

PCL on loans in Wealth Management decreased \$28 million, primarily in U.S. Wealth Management (including City National), reflecting lower provisions on performing loans due to unfavourable macroeconomic factors in the prior year. Lower provisions on impaired loans also contributed to the decrease, mainly due to a provision taken in the consumer discretionary sector in the prior year and higher recoveries in the current quarter.

PCL on loans in Capital Markets decreased \$63 million or 44%, largely driven by lower provisions on impaired loans mainly due to a provision taken in the utilities sector in the prior year, partially offset by provisions on impaired loans taken in

the current year, mainly in the oil & gas sector. Lower provisions on performing loans also contributed to the decrease, as the current year reflected a lower impact from unfavourable macroeconomic factors compared to the prior year.

Q1 2020 vs. Q4 2019

PCL on loans of \$421 million decreased \$84 million, or 17% from the prior quarter, due to lower provisions in Personal & Commercial Banking and Wealth Management. The PCL on loans ratio decreased 6 bps.

PCL on performing loans of \$83 million increased \$12 million, reflecting higher provisions in Personal & Commercial Banking.

PCL on impaired loans of \$338 million decreased \$96 million, reflecting lower provisions in Personal & Commercial Banking and Wealth Management.

PCL on loans in Personal & Commercial Banking decreased \$50 million or 13%, largely reflecting lower provisions on impaired loans in our Canadian Banking commercial and Caribbean Banking portfolios, partially offset by higher provisions on performing loans in Canadian Banking. The increase in provisions on performing loans in Canadian Banking was driven by unfavourable changes in macroeconomic factors and the impact of a favourable model update in the prior quarter, partially offset by lower unfavourable changes in credit quality.

PCL on loans in Wealth Management decreased \$36 million, reflecting lower provisions on impaired loans in U.S. Wealth Management (including City National), mainly due to provisions taken in the consumer discretionary sector in the prior quarter and higher recoveries in the current quarter.

Gross impaired loans

(Millions of Canadian dollars, except percentage amounts)	As at		
	January 31 2020	October 31 2019	January 31 2019
Personal & Commercial Banking	\$ 1,689	\$ 1,712	\$ 1,653
Wealth Management	344	266	223
Capital Markets	903	998	906
Corporate Support and other	—	—	—
Total GIL	\$ 2,936	\$ 2,976	\$ 2,782
Canada ⁽¹⁾			
Retail	\$ 816	\$ 788	\$ 749
Wholesale	709	678	407
GIL	1,525	1,466	1,156
U.S. ⁽¹⁾			
Retail	\$ 31	\$ 36	\$ 30
Wholesale	793	869	949
GIL	824	905	979
Other International ⁽¹⁾			
Retail	\$ 235	\$ 272	\$ 331
Wholesale	352	333	316
GIL	587	605	647
Total GIL	\$ 2,936	\$ 2,976	\$ 2,782
Impaired loans, beginning balance	\$ 2,976	\$ 2,990	\$ 2,183
Classified as impaired during the period (new impaired) ⁽²⁾	713	768	1,133
Net repayments ⁽²⁾	(304)	(206)	(99)
Amounts written off	(399)	(461)	(377)
Other ^{(2) (3)}	(50)	(115)	(58)
Impaired loans, balance at end of period	\$ 2,936	\$ 2,976	\$ 2,782
GIL as a % of related loans and acceptances			
Total GIL as a % of related loans and acceptances	0.45%	0.46%	0.46%
Personal & Commercial Banking	0.36%	0.37%	0.37%
Canadian Banking	0.29%	0.29%	0.26%
Caribbean Banking	4.46%	5.05%	6.54%
Wealth Management	0.48%	0.39%	0.37%
Capital Markets	0.89%	1.02%	0.90%

(1) Geographic information is based on residence of the borrower.

(2) Certain GIL movements for Canadian Banking retail and wholesale portfolios are generally allocated to new impaired, as return to performing status, Net repayments, sold, and foreign exchange translation and other movements amounts are not reasonably determinable. Certain GIL movements for Caribbean Banking retail and wholesale portfolios are generally allocated to Net repayments and new impaired, as return to performing status, sold, and foreign exchange translation and other movements amounts are not reasonably determinable.

(3) Includes return to performing status during the period, recoveries of loans and advances previously written off, sold, and foreign exchange translation and other movements.

Q1 2020 vs. Q1 2019

Total GIL of \$2,936 million increased \$154 million or 6% from the prior year, reflecting higher impaired loans in Wealth Management and Personal & Commercial Banking. The total GIL ratio of 45 bps improved 1 bp.

GIL in Personal & Commercial Banking increased \$36 million or 2%, due to higher impaired loans in our Canadian Banking commercial and retail portfolios, partially offset by lower impaired loans in our Caribbean Banking portfolios.

GIL in Wealth Management increased \$121 million or 54%, primarily reflecting higher impaired loans in U.S. Wealth Management (including City National), mainly in the consumer staples and consumer discretionary sectors.

Q1 2020 vs. Q4 2019

Total GIL of \$2,936 million decreased \$40 million or 1% from the prior quarter, and the total GIL ratio of 45 bps improved 1 bp, reflecting lower impaired loans in Capital Markets and Personal & Commercial Banking, partially offset by higher impaired loans in Wealth Management.

GIL in Personal & Commercial Banking decreased \$23 million or 1%, due to lower impaired loans in Caribbean Banking, partially offset by higher impaired loans in our Canadian Banking portfolios.

GIL in Wealth Management increased \$78 million or 29%, primarily reflecting higher impaired loans in U.S. Wealth Management (including City National), mainly in the consumer staples and consumer discretionary sectors.

GIL in Capital Markets decreased \$95 million or 10%, mainly due to repayments, largely in the oil and gas sector, partially offset by new impaired loans, across a few sectors.

Allowance for credit losses (ACL)

(Millions of Canadian dollars)	As at		
	January 31 2020	October 31 2019	January 31 2019
Personal & Commercial Banking	\$ 2,714	\$ 2,710	\$ 2,604
Wealth Management	254	252	202
Capital Markets	501	455	464
Corporate Support and other	2	2	3
ACL on loans	\$ 3,471	\$ 3,419	\$ 3,273
ACL on other financial assets	43	45	69
Total ACL	\$ 3,514	\$ 3,464	\$ 3,342
ACL on loans is comprised of:			
Retail	\$ 1,910	\$ 1,886	\$ 1,785
Wholesale	746	701	693
ACL on performing loans	\$ 2,656	\$ 2,587	\$ 2,478
ACL on impaired loans	815	832	795

Additional information by geography (1)

Canada			
Retail	\$ 200	\$ 187	\$ 176
Wholesale	153	172	111
ACL on impaired loans	\$ 353	\$ 359	\$ 287
U.S.			
Retail	\$ 2	\$ 1	\$ 2
Wholesale	159	141	226
ACL on impaired loans	\$ 161	\$ 142	\$ 228
Other International			
Retail	\$ 129	\$ 156	\$ 169
Wholesale	172	175	111
ACL on impaired loans	\$ 301	\$ 331	\$ 280
ACL on impaired loans	\$ 815	\$ 832	\$ 795

(1) Geographic information is based on residence of the borrower.

Q1 2020 vs. Q1 2019

Total ACL of \$3,514 million increased \$172 million or 5% from the prior year, largely reflecting an increase of \$198 million in ACL on loans.

ACL on performing loans of \$2,656 million increased \$178 million from the prior year, largely reflecting higher ACL in Personal & Commercial Banking and Wealth Management, mainly driven by volume growth and unfavourable changes in credit quality, partially offset by favourable changes in macroeconomic factors.

ACL on impaired loans of \$815 million increased \$20 million from the prior year, due to higher ACL in Wealth Management and Capital Markets, partially offset by lower ACL in Personal and Commercial Banking.

Q1 2020 vs. Q4 2019

Total ACL of \$3,514 million increased \$50 million or 1% from the prior quarter, reflecting an increase of \$52 million in ACL on loans.

ACL on performing loans of \$2,656 million increased \$69 million from the prior quarter, reflecting higher ACL in Personal & Commercial Banking and Capital Markets, mainly driven by volume growth and unfavourable changes in macroeconomic factors.

ACL on impaired loans of \$815 million decreased \$17 million from the prior quarter, primarily due to lower ACL in Personal & Commercial Banking, partially offset by higher ACL in Capital Markets.

For further details, refer to Note 5 of our Condensed Financial Statements.

Market risk

Market risk is defined to be the impact of market prices upon our financial condition. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities. There have been no material changes to our Market Risk Framework from the framework described in our 2019 Annual Report. We continue to manage the controls and governance procedures that ensure that our market risk exposure is consistent with risk appetite constraints set by the Board of Directors. These controls include limits on probabilistic measures of potential loss in trading positions, such as Value-at-Risk (VaR) and Stressed Value-at-Risk (SVaR).

Market risk controls are also in place to manage structural interest rate risk (SIRR) arising from traditional banking products. Factors contributing to SIRR include the mismatch between future asset and liability repricing dates, relative changes in asset and liability rates, and product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity. To monitor and control SIRR, we assess two primary financial metrics, Net Interest Income (NII) risk and Economic Value of Equity (EVE) risk, under a range of market shocks and scenarios. For further details of our approach to the management of market risk, refer to the Market risk section of our 2019 Annual Report. There has been no material change to the SIRR measurement methodology, controls, or limits from those described in our 2019 Annual Report.

Market risk measures – FVTPL positions

VaR and SVaR

The following table presents our Market risk VaR and Market risk SVaR figures.

(Millions of Canadian dollars)	January 31, 2020				October 31, 2019		January 31, 2019		
	As at	For the three months ended			As at	For the three months ended		As at	For the three months ended
		Average	High	Low		Average			Average
Equity	\$ 22	\$ 20	\$ 33	\$ 14	\$ 22	\$ 21	\$ 20	\$ 22	
Foreign exchange	3	2	4	1	3	3	4	6	
Commodities	1	2	3	1	2	2	2	3	
Interest rate (1)	13	13	19	11	13	15	14	16	
Credit specific (2)	6	5	6	4	5	5	5	5	
Diversification (3)	(18)	(17)	n.m.	n.m.	(17)	(17)	(15)	(18)	
Market risk VaR	\$ 27	\$ 25	\$ 35	\$ 18	\$ 28	\$ 29	\$ 30	\$ 34	
Market risk Stressed VaR	\$ 95	\$ 84	\$ 105	\$ 72	\$ 85	\$ 100	\$ 113	\$ 123	

(1) General credit spread risk and funding spread risk associated with uncollateralized derivatives are included under interest rate VaR.

(2) Credit specific risk captures issuer-specific credit spread volatility.

(3) Market risk VaR is less than the sum of the individual risk factor VaR results due to portfolio diversification.

n.m. not meaningful

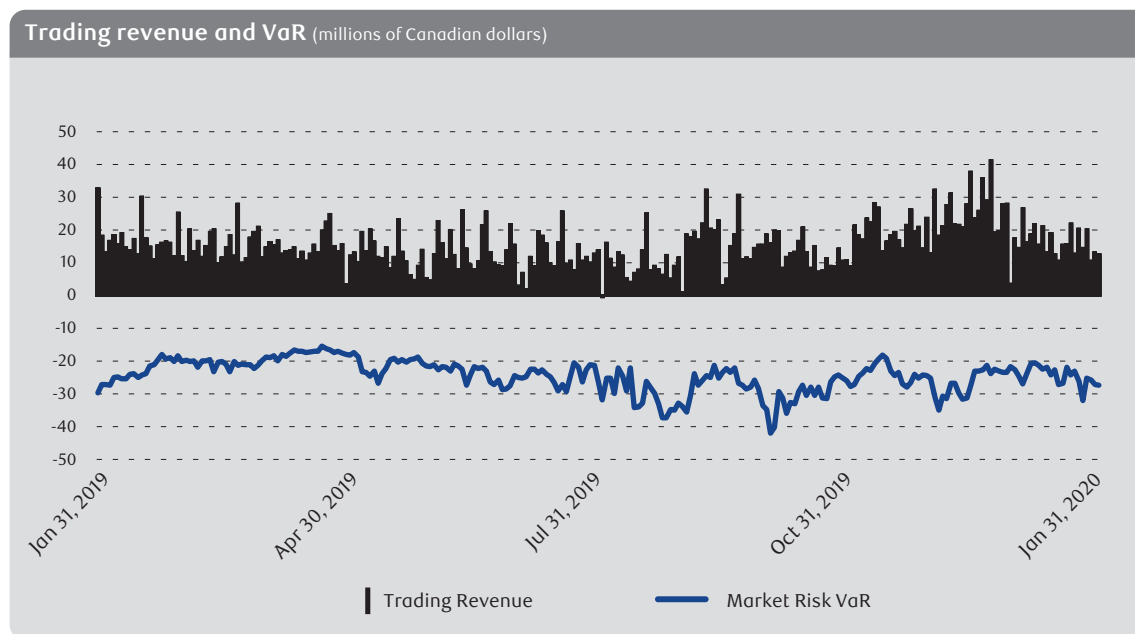
Q1 2020 vs. Q1 2019

Average market risk VaR of \$25 million decreased \$9 million and average SVaR of \$84 million decreased \$39 million from the prior year, mainly due to the impact of lower overall market volatility and a reduction in average inventory levels in our fixed income portfolios in the current quarter.

Q1 2020 vs. Q4 2019

Average market risk VaR of \$25 million decreased \$4 million and average SVaR of \$84 million decreased \$16 million from the prior quarter, mainly driven by lower overall market volatility and lower average inventory levels in our fixed income portfolios in the current quarter.

The following chart displays a bar graph of our daily trading profit and loss and a line graph of our daily market risk VaR. We incurred no net trading losses in the three months ended January 31, 2020 and 1 day of losses totaling \$0.4 million in the three months ended October 31, 2019, which did not exceed VaR on that day.



Market risk measures for assets and liabilities of RBC Insurance®

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as FVTPL. Consequently, changes in the fair values of these assets are recorded in the Consolidated Statements of Income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in Insurance policyholder benefits, claims and acquisition expense. As at January 31, 2020, we held assets in support of \$12.3 billion liabilities with respect to insurance obligations (October 31, 2019 – \$11.4 billion).

Market risk measures – Structural Interest Rate Sensitivities

The following table shows the potential before-tax impact of an immediate and sustained 100 bps increase or decrease in interest rates on projected 12-month NII and EVE for our structural balance sheet, assuming no subsequent hedging. Rate floors are applied within the declining rates scenarios, with floor levels set based on rate changes experienced globally. Interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and management actions.

	January 31 2020						October 31 2019		January 31 2019	
	EVE risk			NII risk (1)						
	Canadian dollar impact	U.S. dollar impact (2)	Total	Canadian dollar impact	U.S. dollar impact (2)	Total				
(Millions of Canadian dollars)							EVE risk	NII risk (1)	EVE risk	NII risk (1)
Before-tax impact of:										
100 bps increase in rates	\$ (1,334)	\$ (230)	\$ (1,564)	\$ 377	\$ 91	\$ 468	\$ (1,356)	\$ 479	\$ (1,019)	\$ 487
100 bps decrease in rates	1,243	(100)	1,143	(508)	(119)	(627)	920	(637)	549	(617)

(1) Represents the 12-month NII exposure to an instantaneous and sustained shift in interest rates.

(2) Represents the impact on the SIRR portfolios held in our City National and U.S. banking operations.

As at January 31, 2020, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$627 million, down from \$637 million last quarter. An immediate and sustained +100 bps shock at the end of January 31, 2020 would have had a negative impact to the bank's EVE of \$1,564 million, up from \$1,356 million reported last quarter. The quarter-over-quarter change in NII sensitivity was stable, while the quarter-over-quarter change in EVE sensitivity is mainly attributed to growth in the structural balance sheet. During the first quarter of 2020, SIRR NII and EVE risks remained well within approved limits.

Market risk measures for other material non-trading portfolios

Investment securities carried at FVOCI

We held \$77.5 billion of investment securities carried at FVOCI as at January 31, 2020, compared to \$57.7 billion in the prior quarter. We hold debt securities carried at FVOCI primarily as investments, as well as to manage liquidity risk and hedge interest rate risk in our non-trading banking balance sheet. As at January 31, 2020, our portfolio of investment securities carried at FVOCI is interest rate sensitive and would impact OCI by a pre-tax change in value of \$8 million as measured by the change in the value of the securities for a one basis point parallel increase in yields. The portfolio also exposes us to credit spread risk of a pre-tax change in value of \$22 million, as measured by the change in value for a one basis point widening of

credit spreads. The value of the investment securities carried at FVOCI included in our SIRR measure as at January 31, 2020 was \$11.5 billion. Our investment securities carried at FVOCI also include equity exposures of \$0.5 billion as at January 31, 2020, compared to \$0.4 billion in the prior quarter.

Non-trading foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. Our revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar, due to our operations in the U.S. and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro, due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of our operations. We are also exposed to foreign exchange rate risk arising from our investments in foreign operations. For unhedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases our shareholders' equity through the other components of equity and decreases the translated value of the Risk-weighted Assets (RWA) of the foreign currency-denominated asset. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, we consider these impacts in selecting an appropriate level of our investments in foreign operations to be hedged.

Derivatives related to non-trading activity

Derivatives are also used to hedge market risk exposure unrelated to our trading activity. Hedge accounting is elected where applicable. These derivatives are included in our SIRR measure and other internal non-trading market risk measures. We use interest rate swaps to manage our SIRR, funding and investment activities. Interest rate swaps are also used to hedge changes in the fair value of certain fixed-rate instruments. We also use foreign exchange derivatives to manage our exposure to equity investments in subsidiaries that are denominated in foreign currencies, particularly the U.S. dollar, British Pound, and Euro.

For further details on the application of hedge accounting and the use of derivatives for hedging activities, refer to Notes 2 and 8 of our 2019 Annual Consolidated Financial Statements.

Linkage of market risk to selected balance sheet items

The following table provides the linkages between selected balance sheet items with positions included in our trading market risk and non-trading market risk disclosures, which illustrates how we manage market risk for our assets and liabilities through different risk measures:

(Millions of Canadian dollars)	As at January 31, 2020			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
Assets subject to market risk				
Cash and due from banks	\$ 34,120	\$ –	\$ 34,120	Interest rate
Interest-bearing deposits with banks	31,331	19,166	12,165	Interest rate
Securities				
Trading	145,015	134,046	10,969	Interest rate, credit spread
Investment, net of applicable allowance	121,652	–	121,652	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	324,187	261,216	62,971	Interest rate
Loans				
Retail	430,841	7,285	423,556	Interest rate
Wholesale	202,238	8,901	193,337	Interest rate
Allowance for loan losses	(3,139)	–	(3,139)	Interest rate
Segregated fund net assets	1,788	–	1,788	Interest rate
Other				
Derivatives	93,982	91,622	2,360	Interest rate, foreign exchange
Other assets	82,679	5,315	77,364	Interest rate
Assets not subject to market risk (3)	11,610			
Total assets	\$ 1,476,304	\$ 527,551	\$ 937,143	
Liabilities subject to market risk				
Deposits	\$ 902,284	\$ 95,918	\$ 806,366	Interest rate
Segregated fund liabilities	1,788	–	1,788	Interest rate
Other				
Obligations related to securities sold short	35,624	35,624	–	
Obligations related to assets sold under repurchase agreements and securities loaned	254,391	247,170	7,221	Interest rate
Derivatives	94,611	92,527	2,084	Interest rate, foreign exchange
Other liabilities	81,258	9,107	72,151	Interest rate
Subordinated debentures	9,269	–	9,269	Interest rate
Liabilities not subject to market risk (4)	13,018			
Total liabilities	\$ 1,392,243	\$ 480,346	\$ 898,879	
Total equity	\$ 84,061			
Total liabilities and equity	\$ 1,476,304			

(1) Traded risk includes positions that are classified or designated as FVTPL and positions whose revaluation gains and losses are reported in revenue. Market risk measures of VaR and SVaR and stress testing are used as risk controls for traded risk.

(2) Non-traded risk includes positions used in the management of the SIRR and other non-trading portfolios. Other material non-trading portfolios include positions from RBC Insurance® and investment securities, net of applicable allowance, not included in SIRR.

(3) Assets not subject to market risk include \$11,610 million of physical and other assets.

(4) Liabilities not subject to market risk include \$13,018 million of payroll related and other liabilities.

(Millions of Canadian dollars)	As at October 31, 2019			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
Assets subject to market risk				
Cash and due from banks	\$ 26,310	\$ –	\$ 26,310	Interest rate
Interest-bearing deposits with banks	38,345	22,287	16,058	Interest rate
Securities				
Trading	146,534	136,609	9,925	Interest rate, credit spread
Investment, net of applicable allowance	102,470	–	102,470	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	306,961	246,068	60,893	Interest rate
Loans				
Retail	426,086	10,876	415,210	Interest rate
Wholesale	195,870	7,111	188,759	Interest rate
Allowance for loan losses	(3,100)	–	(3,100)	Interest rate
Segregated fund net assets	1,663	–	1,663	Interest rate
Other				
Derivatives	101,560	99,318	2,242	Interest rate, foreign exchange
Other assets	79,802	4,648	75,154	Interest rate
Assets not subject to market risk (3)	6,434			
Total assets	\$ 1,428,935	\$ 526,917	\$ 895,584	
Liabilities subject to market risk				
Deposits	\$ 886,005	\$ 99,137	\$ 786,868	Interest rate
Segregated fund liabilities	1,663	–	1,663	Interest rate
Other				
Obligations related to securities sold short	35,069	35,069	–	
Obligations related to assets sold under repurchase agreements and securities loaned	226,586	218,612	7,974	Interest rate
Derivatives	98,543	96,512	2,031	Interest rate, foreign exchange
Other liabilities	79,040	8,918	70,122	Interest rate
Subordinated debentures	9,815	–	9,815	Interest rate
Liabilities not subject to market risk (4)	8,589			
Total liabilities	\$ 1,345,310	\$ 458,248	\$ 878,473	
Total equity	\$ 83,625			
Total liabilities and equity	\$ 1,428,935			

(1) Traded risk includes positions that are classified or designated as FVTPL and positions whose revaluation gains and losses are reported in revenue. Market risk measures of VaR and SVaR and stress testing are used as risk controls for traded risk.

(2) Non-traded risk includes positions used in the management of the SIRR and other non-trading portfolios. Other material non-trading portfolios include positions from RBC Insurance® and investment securities, net of applicable allowance, not included in SIRR.

(3) Assets not subject to market risk include \$6,434 million of physical and other assets.

(4) Liabilities not subject to market risk include \$8,589 million of payroll related and other liabilities.

Liquidity and funding risk

Liquidity and funding risk (liquidity risk) is the risk that we may be unable to generate sufficient cash or its equivalents in a timely and cost-effective manner to meet our commitments as they come due. Liquidity risk arises from mismatches in the timing and value of on-balance sheet and off-balance sheet cash flows.

Our Liquidity Risk Management Framework (LRMF) is designed to ensure that we have sufficient liquidity to satisfy current and prospective commitments in both normal and stressed conditions. There have been no material changes to our LRMF as described in our 2019 Annual Report.

We continue to maintain liquidity and funding that is appropriate for the execution of our strategy. Liquidity risk remains well within our risk appetite.

On January 1, 2020, the OSFI regulatory minimum for the Net Stable Funding Ratio (NSFR) of 100% became effective, in accordance with the revised LAR guidelines. The NSFR is determined based on the liquidity characteristics and maturity profile of our assets, liabilities and off-balance sheet exposures and is intended to reduce structural funding risk by requiring banks to maintain a surplus of available stable funding over the required stable funding. We do not anticipate any challenges in meeting this requirement. The requirement to disclose consolidated NSFR and its major components will become effective for Canadian D-SIBs on January 31, 2021.

Liquidity reserve

Our liquidity reserve consists of available unencumbered liquid assets as well as uncommitted and undrawn central bank borrowing facilities that could be accessed under extraordinary circumstances subject to satisfying certain preconditions as set by various Central Banks (e.g., BoC, the Fed, Bank of England, and Bank of France).

To varying degrees, unencumbered liquid assets represent a ready source of funding. Unencumbered assets are the difference between total and encumbered assets from both on- and off-balance sheet sources. Encumbered assets, in turn, are not considered a source of liquidity in measures of liquidity risk.

Although unused wholesale funding capacity, which is regularly assessed, could be another potential source of liquidity to mitigate stressed conditions, it is excluded in the determination of the liquidity reserve.

	As at January 31, 2020				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
(Millions of Canadian dollars)					
Cash and due from banks	\$ 34,120	\$ –	\$ 34,120	\$ 2,899	\$ 31,221
Interest-bearing deposits with banks	31,331	–	31,331	331	31,000
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	221,047	327,977	549,024	381,064	167,960
Other securities	97,168	116,376	213,544	93,188	120,356
Undrawn credit lines granted by central banks (2)	7,679	–	7,679	–	7,679
Other assets eligible as collateral for discount (3)	107,727	–	107,727	–	107,727
Other liquid assets (4)	21,955	–	21,955	20,993	962
Total liquid assets	\$ 521,027	\$ 444,353	\$ 965,380	\$ 498,475	\$ 466,905

	As at October 31, 2019				
	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
(Millions of Canadian dollars)					
Cash and due from banks	\$ 26,310	\$ –	\$ 26,310	\$ 2,860	\$ 23,450
Interest-bearing deposits with banks	38,345	–	38,345	329	38,016
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	206,960	311,019	517,979	345,753	172,226
Other securities	90,026	115,261	205,287	96,184	109,103
Undrawn credit lines granted by central banks (2)	9,534	–	9,534	–	9,534
Other assets eligible as collateral for discount (3)	109,327	–	109,327	–	109,327
Other liquid assets (4)	21,732	–	21,732	21,316	416
Total liquid assets	\$ 502,234	\$ 426,280	\$ 928,514	\$ 466,442	\$ 462,072

	As at	
	January 31 2020	October 31 2019
(Millions of Canadian dollars)		
Royal Bank of Canada	\$ 232,799	\$ 224,063
Foreign branches	64,856	71,062
Subsidiaries	169,250	166,947
Total unencumbered liquid assets	\$ 466,905	\$ 462,072

- (1) Includes liquid securities issued by provincial governments and U.S. government-sponsored entities working under U.S. Federal government's conservatorship (e.g., Federal National Mortgage Association and Federal Home Loan Mortgage Corporation).
- (2) Includes loans that qualify as eligible collateral for the discount window facility available to us at the Federal Reserve Bank of New York (FRBNY). Amounts are face value and would be subject to collateral margin requirements applied by the FRBNY to determine collateral value/borrowing capacity. Access to the discount window borrowing program is conditional on meeting requirements set by the FRBNY and borrowings are typically expected to be infrequent and due to uncommon occurrences requiring temporary accommodation.
- (3) Represents our unencumbered Canadian dollar non-mortgage loan book (at face value) that could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the BoC for advances under its Emergency Lending Assistance (ELA) program. ELA is not considered a source of available liquidity in our normal liquidity risk profile but could in extraordinary circumstances, where normal market liquidity is seriously impaired, allow us and other banks to monetize assets eligible as collateral to meet requirements and mitigate further market liquidity disruption. The balance also includes our unencumbered mortgage loans that qualify as eligible collateral at Federal Home Loan Bank (FHLB).
- (4) Encumbered liquid assets amount represents cash collateral and margin deposit amounts pledged related to over-the-counter (OTC) and exchange-traded derivative transactions.

The liquidity reserve is typically most affected by routine flows of client banking activity where liquid asset portfolios adjust to the change in cash balances, and additionally from capital markets activities where business strategies and client flows may also affect the addition or subtraction of liquid assets in the overall calculation of the liquidity reserve. Corporate Treasury also affects liquidity reserves through the management of funding issuances where reserves absorb timing mismatches between debt issuances and deployment into business activities.

Q1 2020 vs. Q4 2019

Total liquid assets increased \$37 billion or 4%, primarily due to increase in on-balance sheet securities and securities received as collateral under reverse repurchase agreements and collateral swap transactions. However, the increase in collateral received was offset with a corresponding increase in collateral pledged under encumbered liquid assets due to repurchase transactions and collateral swap transactions.

Asset encumbrance

The table below provides a summary of our on- and off-balance sheet amounts for cash, securities and other assets, distinguishing between those that are encumbered or available for sale or use as collateral in secured funding transactions. Other assets, such as mortgages and credit card receivables, can also be monetized, albeit over longer timeframes than those required for marketable securities. As at January 31, 2020, our unencumbered assets available as collateral comprised 28% of total assets (October 31, 2019 – 29%).

Asset encumbrance

(Millions of Canadian dollars)	As at									
	January 31 2020					October 31 2019				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total	Pledged as collateral	Other (1)	Available as collateral (2)	Other (3)	Total
Cash and due from banks	\$ –	\$ 2,899	\$ 31,221	\$ –	\$ 34,120	\$ –	\$ 2,860	\$ 23,450	\$ –	\$ 26,310
Interest-bearing deposits with banks	–	331	31,000	–	31,331	–	329	38,016	–	38,345
Securities										
Trading	44,278	–	98,240	2,497	145,015	44,431	–	99,420	2,683	146,534
Investment, net of applicable allowance	16,481	–	105,122	49	121,652	16,376	–	86,045	49	102,470
Assets purchased under reverse repurchase agreements and securities borrowed (4)	432,249	23,468	34,221	5,578	495,516	399,013	22,793	49,325	5,214	476,345
Loans										
Retail										
Mortgage securities	30,834	–	41,281	–	72,115	31,345	–	40,401	–	71,746
Mortgage loans	49,997	–	21,210	170,882	242,089	42,103	–	22,598	171,644	236,345
Non-mortgage loans	7,129	–	59,583	49,925	116,637	7,094	–	62,204	48,697	117,995
Wholesale	–	–	35,226	167,012	202,238	–	–	34,882	160,988	195,870
Allowance for loan losses	–	–	–	(3,139)	(3,139)	–	–	–	(3,100)	(3,100)
Segregated fund net assets	–	–	–	1,788	1,788	–	–	–	1,663	1,663
Other										
Derivatives	–	–	–	93,982	93,982	–	–	–	101,560	101,560
Others (5)	20,993	–	962	72,334	94,289	21,316	–	416	64,504	86,236
Total assets	\$ 601,961	\$ 26,698	\$ 458,066	\$ 560,908	\$ 1,647,633	\$ 561,678	\$ 25,982	\$ 456,757	\$ 553,902	\$ 1,598,319

(1) Includes assets restricted from use to generate secured funding due to legal or other constraints.

(2) Includes loans that could be used to collateralize central bank advances. Our unencumbered Canadian dollar non-mortgage loan book (at face value) could, subject to satisfying conditions for borrowing and application of prescribed collateral margin requirements, be pledged to the BoC for advances under its ELA program. It also includes our unencumbered mortgage loans that qualify as eligible collateral at FHLB. We also lodge loans that qualify as eligible collateral for the discount window facility available to us at the FRBNY. ELA and other central bank facilities are not considered sources of available liquidity in our normal liquidity risk profile. However, banks could monetize assets meeting collateral criteria during periods of extraordinary and severe disruption to market-wide liquidity.

(3) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral but would not be considered readily available since they may not be acceptable at central banks or for other lending programs.

(4) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes \$23.5 billion (October 31, 2019 – \$22.8 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.

(5) The Pledged as collateral amount represents cash collateral and margin deposit amounts pledged related to OTC and exchange-traded derivative transactions.

Funding

Funding strategy

Core funding, comprising capital, longer-term wholesale liabilities and a diversified pool of personal and, to a lesser extent, commercial and institutional deposits, is the foundation of our structural liquidity position.

Deposit and funding profile

As at January 31, 2020, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were \$601 billion or 50% of our total funding (October 31, 2019 – \$594 billion or 51%). The remaining portion is comprised of short- and long-term wholesale funding.

Funding for highly liquid assets consists primarily of short-term wholesale funding that reflects the monetization period of those assets. Long-term wholesale funding is used mostly to fund less liquid wholesale assets and to support liquidity asset buffers.

On April 18, 2018, the Department of Finance published bail-in regulations under the Canada Deposit Insurance Corporation (CDIC) Act and the Bank Act, which became effective September 23, 2018. Senior long-term debt issued by the bank on or after September 23, 2018, that has an original term greater than 400 days and is marketable, subject to certain exceptions, is subject to the Canadian Bank Recapitalization (Bail-in) regime. Under the Bail-in regime, in circumstances when the Superintendent of Financial Institutions has determined that a bank may no longer be viable, the Governor in Council may, upon a recommendation of the Minister of Finance that he or she is of the opinion that it is in the public interest to do so, grant an order directing the CDIC to convert all or a portion of certain shares and liabilities of that bank into common shares. As at January 31, 2020, the notional value of issued and outstanding long-term debt subject to conversion under the Bail-in regime was \$26,684 million (October 31, 2019 – \$20,320 million).

For further details on our wholesale funding, refer to the Composition of wholesale funding tables below.

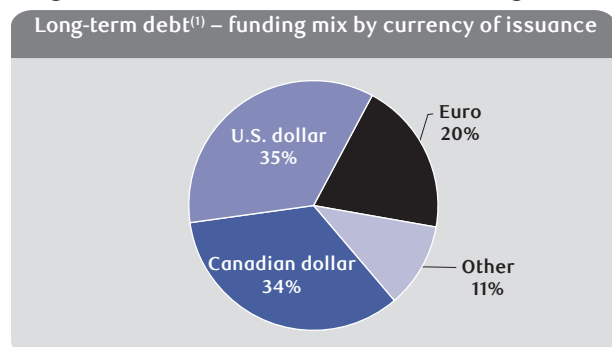
Long-term debt issuance

Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and take appropriate and timely actions. We operate long-term debt issuance registered programs. The following table summarizes these programs with their authorized limits by geography.

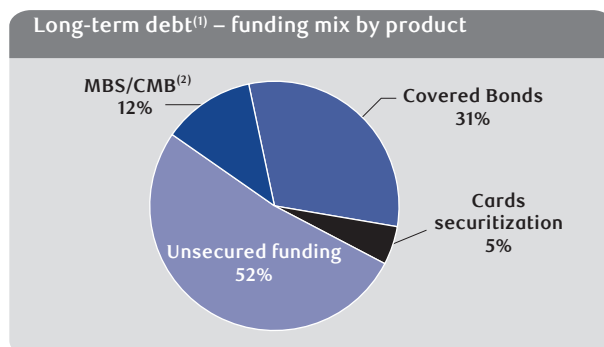
Programs by geography

Canada	U.S.	Europe/Asia
• Canadian Shelf Program – \$25 billion	• U.S. Shelf Program – US\$40 billion	• European Debt Issuance Program – US\$40 billion
		• Global Covered Bond Program – €32 billion
		• Japanese Issuance Programs – ¥1 trillion

We also raise long-term funding using Canadian Senior Notes, Canadian National Housing Act MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic market by foreign firms). We continuously evaluate opportunities to expand into new markets and untapped investor segments since diversification expands our wholesale funding flexibility, minimizes funding concentration and dependency, and generally reduces financing costs. As presented in the following charts, our current long-term debt profile is well-diversified by both currency and product. Maintaining competitive credit ratings is also critical to cost-effective funding.



(1) Based on original term to maturity greater than 1 year



(1) Based on original term to maturity greater than 1 year
(2) Mortgage-backed securities and Canada Mortgage Bonds

The following table provides our composition of wholesale funding based on remaining term to maturity:

Composition of wholesale funding⁽¹⁾

(Millions of Canadian dollars)	As at January 31, 2020							
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	\$ 5,476	\$ 44	\$ –	\$ 33	\$ 5,553	\$ –	\$ –	\$ 5,553
Certificates of deposit and commercial paper	3,331	17,696	17,345	16,815	55,187	544	–	55,731
Asset-backed commercial paper (3)	5,120	4,846	3,719	3,169	16,854	–	–	16,854
Senior unsecured medium-term notes (4)	1,626	5,323	4,982	13,682	25,613	14,993	37,389	77,995
Senior unsecured structured notes (5)	34	140	598	1,179	1,951	2,077	5,065	9,093
Mortgage securitization	–	1,795	371	1,517	3,683	2,720	11,162	17,565
Covered bonds/asset-backed securities (6)	2,647	3,656	–	8,822	15,125	11,731	24,497	51,353
Subordinated liabilities	–	–	935	1,476	2,411	1,000	5,780	9,191
Other (7)	8,973	2,431	3,133	375	14,912	–	10,400	25,312
Total	\$ 27,207	\$ 35,931	\$ 31,083	\$ 47,068	\$ 141,289	\$ 33,065	\$ 94,293	\$ 268,647
Of which:								
– Secured	\$ 15,438	\$ 11,838	\$ 5,546	\$ 13,508	\$ 46,330	\$ 14,451	\$ 35,659	\$ 96,440
– Unsecured	11,769	24,093	25,537	33,560	94,959	18,614	58,634	172,207

(Millions of Canadian dollars)	As at October 31, 2019							
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	\$ 4,087	\$ –	\$ 388	\$ 33	\$ 4,508	\$ –	\$ –	\$ 4,508
Certificates of deposit and commercial paper	2,917	12,037	17,390	22,038	54,382	132	–	54,514
Asset-backed commercial paper (3)	2,542	3,188	6,543	3,905	16,178	–	–	16,178
Senior unsecured medium-term notes (4)	11	2,293	9,183	14,188	25,675	18,856	29,756	74,287
Senior unsecured structured notes (5)	847	676	171	1,342	3,036	1,810	5,047	9,893
Mortgage securitization	–	524	1,796	727	3,047	3,523	11,015	17,585
Covered bonds/asset-backed securities (6)	–	–	6,282	2,305	8,587	14,337	23,426	46,350
Subordinated liabilities	–	2,000	–	998	2,998	2,500	4,290	9,788
Other (7)	9,489	1,224	157	1,663	12,533	141	9,976	22,650
Total	\$ 19,893	\$ 21,942	\$ 41,910	\$ 47,199	\$ 130,944	\$ 41,299	\$ 83,510	\$ 255,753
Of which:								
– Secured	\$ 10,339	\$ 3,929	\$ 14,621	\$ 6,937	\$ 35,826	\$ 17,860	\$ 34,441	\$ 88,127
– Unsecured	9,554	18,013	27,289	40,262	95,118	23,439	49,069	167,626

(1) Excludes bankers' acceptances and repos.

(2) Excludes deposits associated with services we provide to banks (e.g., custody, cash management).

(3) Only includes consolidated liabilities, including our collateralized commercial paper program.

(4) Includes deposit notes.

(5) Includes notes where the payout is tied to movements in foreign exchange, commodities and equities.

(6) Includes credit card and mortgage loans.

(7) Includes tender option bonds (secured) of \$7,889 million (October 31, 2019 – \$8,014 million), bearer deposit notes (unsecured) of \$4,399 million (October 31, 2019 – \$4,813 million), other long-term structured deposits (unsecured) of \$10,245 million (October 31, 2019 – \$9,823 million), and FHLB advances (secured) of \$2,779 million (October 31, 2019 – \$nil).

Credit ratings

Our ability to access unsecured funding markets and to engage in certain collateralized business activities on a cost-effective basis are primarily dependent upon maintaining competitive credit ratings. Credit ratings and outlooks provided by rating agencies reflect their views and methodologies. Ratings are subject to change, based on a number of factors including, but not limited to, our financial strength, competitive position, liquidity and other factors not completely within our control.

Other than as noted below, there have been no changes to our major credit ratings as disclosed in our 2019 Annual Report.

Credit ratings⁽¹⁾

	As at February 20, 2020			
	Short-term debt	Legacy senior long-term debt (2)	Senior long-term debt (3)	Outlook
Moody's (4)	P-1	Aa2	A2	stable
Standard & Poor's (5)	A-1+	AA-	A	stable
Fitch Ratings (6)	F1+	AA	AA	stable
DBRS (7)	R-1(high)	AA (high)	AA	stable

- (1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.
- (2) Includes senior long-term debt issued prior to September 23, 2018 and senior long-term debt issued on or after September 23, 2018 which is excluded from the Bail-in regime.
- (3) Includes senior long-term debt issued on or after September 23, 2018 which is subject to conversion under the Bail-in regime.
- (4) On August 1, 2019, Moody's affirmed our ratings with a stable outlook.
- (5) On June 24, 2019, Standard & Poor's affirmed our ratings with a stable outlook.
- (6) On January 17, 2020, Fitch Ratings affirmed our ratings with a stable outlook.
- (7) On June 18, 2019, DBRS revised our outlook to stable from positive, upgraded our legacy senior long-term debt rating to AA (high) from AA and upgraded our senior long-term debt rating to AA from AA (low).

Additional contractual obligations for rating downgrades

We are required to deliver collateral to certain counterparties in the event of a downgrade to our current credit rating. The following table provides the additional collateral obligations required at the reporting date in the event of a one-, two- or three-notch downgrade to our credit ratings. These additional collateral obligations are incremental requirements for each successive downgrade and do not represent the cumulative impact of multiple downgrades. The amounts reported change periodically as a result of several factors, including the transfer of trading activity to centrally cleared financial market infrastructures and exchanges, the expiration of transactions with downgrade triggers, the imposition of internal limitations on new agreements to exclude downgrade triggers, as well as normal course mark-to-market. There is no outstanding senior debt issued in the market that contains rating triggers that would lead to early prepayment of principal.

Additional contractual obligations for rating downgrades

(Millions of Canadian dollars)	As at					
	January 31 2020			October 31 2019		
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	\$ 194	\$ 65	\$ 135	\$ 165	\$ 64	\$ 124
Other contractual funding or margin requirements (1)	205	45	9	180	176	—

- (1) Includes Guaranteed Investment Certificates (GICs) issued by our municipal markets business out of New York.

Liquidity Coverage Ratio (LCR)

The LCR is a Basel III metric that measures the sufficiency of high-quality liquid assets (HQLA) available to meet liquidity needs over a 30-day period in an acute stress scenario. The Basel Committee on Banking Supervision (BCBS) and OSFI regulatory minimum coverage level for LCR is currently 100%.

OSFI requires Canadian banks to disclose the LCR using the standard Basel disclosure template and calculated using the average of daily LCR positions during the quarter.

Liquidity coverage ratio common disclosure template ⁽¹⁾

	For the three months ended			
	January 31 2020		October 31 2019	
	Total unweighted value (average) (2)	Total weighted value (average)	Total unweighted value (average) (2)	Total weighted value (average)
(Millions of Canadian dollars, except percentage amounts)				
High-quality liquid assets				
Total high-quality liquid assets (HQLA)	n.a.	\$ 249,762	n.a.	\$ 234,605
Cash outflows				
Retail deposits and deposits from small business customers, of which:	\$ 271,090	21,973	\$ 266,868	20,417
Stable deposits ⁽³⁾	96,833	2,905	89,565	2,687
Less stable deposits	174,257	19,068	177,303	17,730
Unsecured wholesale funding, of which:	308,718	142,391	303,129	137,946
Operational deposits (all counterparties) and deposits in networks of cooperative banks ⁽⁴⁾	135,265	32,379	133,484	31,907
Non-operational deposits	144,506	81,065	145,888	82,282
Unsecured debt	28,947	28,947	23,757	23,757
Secured wholesale funding	n.a.	30,074	n.a.	33,904
Additional requirements, of which:	239,573	52,559	265,287	72,268
Outflows related to derivative exposures and other collateral requirements	34,796	15,092	57,869	33,108
Outflows related to loss of funding on debt products	7,633	7,633	7,761	7,761
Credit and liquidity facilities	197,144	29,834	199,657	31,399
Other contractual funding obligations ⁽⁵⁾	20,196	20,196	19,108	19,108
Other contingent funding obligations ⁽⁶⁾	460,167	8,091	441,413	7,999
Total cash outflows	n.a.	\$ 275,284	n.a.	\$ 291,642
Cash inflows				
Secured lending (e.g., reverse repos)	\$ 281,430	\$ 46,792	\$ 313,698	\$ 52,469
Inflows from fully performing exposures	14,151	9,708	15,692	11,154
Other cash inflows	25,039	25,039	43,442	43,442
Total cash inflows	n.a.	\$ 81,539	n.a.	\$ 107,065
		Total adjusted value		Total adjusted value
Total HQLA		\$ 249,762		\$ 234,605
Total net cash outflows		193,745		184,577
Liquidity coverage ratio		129%		127%

- (1) The LCR is calculated in accordance with OSFI's LAR guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS. The LCR for the quarter ended January 31, 2020 is calculated as an average of 62 daily positions.
- (2) With the exception of other contingent funding obligations, unweighted inflow and outflow amounts are items maturing or callable in 30 days or less. Other contingent funding obligations also include debt securities with remaining maturity greater than 30 days.
- (3) As defined by the BCBS, stable deposits from retail and small business customers are deposits that are insured and are either held in transactional accounts or the bank has an established relationship with the client making the withdrawal unlikely.
- (4) Operational deposits from customers other than retail and small and medium-sized enterprises (SMEs), are deposits which clients need to keep with the bank in order to facilitate their access and ability to use payment and settlement systems primarily for clearing, custody and cash management activities.
- (5) Other contractual funding obligations primarily include outflows from unsettled securities trades and outflows from obligations related to securities sold short.
- (6) Other contingent funding obligations include outflows related to other off-balance sheet facilities that carry low LCR runoff factors (0% – 5%).
- n.a. not applicable

We manage our LCR position within a target range that reflects our liquidity risk tolerance and takes into account business mix, asset composition and funding capabilities. The range is subject to periodic review in light of changes to internal requirements and external developments.

We maintain HQLAs in major currencies with dependable market depth and breadth. Our treasury management practices ensure that the levels of HQLA are actively managed to meet target LCR objectives. Our Level 1 assets, as calculated according to OSFI LAR and the BCBS LCR requirements, represent 81% of total HQLA. These assets consist of cash, placements with central banks and highly rated securities issued or guaranteed by governments, central banks and supranational entities.

LCR captures cash flows from on- and off-balance sheet activities that are either expected or could potentially occur within 30 days in an acute stress scenario. Cash outflows result from the application of withdrawal and non-renewal factors to demand and term deposits, differentiated by client type (wholesale, retail and small- and medium-sized enterprises). Cash outflows also arise from business activities that create contingent funding and collateral requirements, such as repo funding, derivatives, short sales of securities and the extension of credit and liquidity commitments to clients. Cash inflows arise primarily from maturing secured loans, interbank loans and non-HQLA securities.

LCR does not reflect any market funding capacity that we believe would be available in a stress situation. All maturing wholesale debt is assigned 100% outflow in the LCR calculation.

Q1 2020 vs. Q4 2019

The average LCR for the quarter ended January 31, 2020 was 129%, which translates into a surplus of approximately \$56 billion, compared to 127% in the prior quarter. The increase in the LCR surplus from the previous quarter is primarily due to a change in funding and business mix.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items

The following tables provide remaining contractual maturity profiles of all our assets, liabilities, and off-balance sheet items at their carrying value (e.g., amortized cost or fair value) at the balance sheet date. Off-balance sheet items are allocated based on the expiry date of the contract.

Details of contractual maturities and commitments to extend funds are a source of information for the management of liquidity risk. Among other purposes, these details form a basis for modelling a behavioural balance sheet with effective maturities to calculate liquidity risk measures. For further details, refer to the Risk measurement section within the Liquidity and funding risk section of our 2019 Annual Report.

	As at January 31, 2020										
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total	
Assets											
Cash and deposits with banks	\$ 62,994	\$ 1	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,456	\$ 65,451	
Securities											
Trading (1)	90,235	22	69	21	19	96	108	9,557	44,888	145,015	
Investment, net of applicable allowance	2,080	9,158	4,099	3,377	4,767	27,704	22,850	47,118	499	121,652	
Assets purchased under reverse repurchase agreements and securities borrowed	177,395	80,269	25,806	13,439	14,467	127	–	–	12,684	324,187	
Loans, net of applicable allowance	23,953	18,689	28,999	26,978	28,199	118,544	243,370	52,401	88,807	629,940	
Other											
Customers' liability under acceptances	13,112	5,595	129	–	4	–	–	–	(39)	18,801	
Derivatives	4,718	6,115	4,012	3,510	3,731	8,555	16,171	47,169	1	93,982	
Other financial assets	27,883	1,633	1,833	127	109	208	303	1,922	2,333	36,351	
Total financial assets	\$402,370	\$121,482	\$64,947	\$47,452	\$51,296	\$155,234	\$282,802	\$158,167	\$151,629	\$1,435,379	
Other non-financial assets	3,974	2,189	120	191	415	1,320	1,812	6,416	24,488	40,925	
Total assets	\$406,344	\$123,671	\$65,067	\$47,643	\$51,711	\$156,554	\$284,614	\$164,583	\$176,117	\$1,476,304	
Liabilities and equity											
Deposits (2)											
Unsecured borrowing	\$ 52,623	\$ 47,214	\$43,686	\$45,994	\$29,521	\$ 24,937	\$ 58,240	\$ 17,557	\$477,175	\$ 796,947	
Secured borrowing	2,671	9,551	6,087	3,868	5,363	7,476	19,525	5,897	–	60,438	
Covered bonds	2,646	2,199	–	5,261	1,848	9,909	12,501	10,535	–	44,899	
Other											
Acceptances	13,116	5,594	129	–	4	–	–	–	1	18,844	
Obligations related to securities sold short	35,624	–	–	–	–	–	–	–	–	35,624	
Obligations related to assets sold under repurchase agreements and securities loaned	214,377	30,867	2,064	354	5	–	–	–	6,724	254,391	
Derivatives	5,416	5,933	4,336	3,708	4,033	8,038	16,185	46,919	43	94,611	
Other financial liabilities	25,633	2,724	3,518	543	760	796	2,177	11,478	499	48,128	
Subordinated debentures	–	–	–	–	–	–	316	8,953	–	9,269	
Total financial liabilities	\$352,106	\$104,082	\$59,820	\$59,728	\$41,534	\$ 51,156	\$108,944	\$101,339	\$484,442	\$1,363,151	
Other non-financial liabilities	1,417	946	225	975	2,079	835	757	11,999	9,859	29,092	
Equity	–	–	–	–	–	–	–	–	84,061	84,061	
Total liabilities and equity	\$353,523	\$105,028	\$60,045	\$60,703	\$43,613	\$ 51,991	\$109,701	\$113,338	\$578,362	\$1,476,304	
Off-balance sheet items											
Financial guarantees	\$ 666	\$ 1,775	\$ 2,854	\$ 2,452	\$ 2,498	\$ 844	\$ 5,207	\$ 48	\$ 51	\$ 16,395	
Commitments to extend credit	2,385	6,563	9,146	7,772	12,032	40,296	165,908	16,415	1,343	261,860	
Other credit-related commitments	729	1,069	1,915	1,388	1,317	239	524	8	90,838	98,027	
Other commitments	83	12	18	18	18	97	224	395	491	1,356	
Total off-balance sheet items	\$ 3,863	\$ 9,419	\$13,933	\$11,630	\$15,865	\$ 41,476	\$171,863	\$ 16,866	\$ 92,723	\$ 377,638	

- (1) Trading debt securities classified as FVTPL have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.
(2) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base for our operations and liquidity needs, as explained in the preceding Deposit and funding profile section.

As at October 31, 2019										
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	\$ 62,095	\$ 3	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,557	\$ 64,655
Securities										
Trading (1)	96,229	14	45	10	21	64	97	8,601	41,453	146,534
Investment, net of applicable allowance	3,069	3,960	3,857	2,886	3,511	16,203	24,638	43,907	439	102,470
Assets purchased under reverse repurchase agreements and securities borrowed	164,870	62,971	41,569	10,985	14,993	133	–	–	11,440	306,961
Loans, net of applicable allowance	23,097	17,145	25,854	28,796	29,533	120,524	232,364	51,049	90,494	618,856
Other										
Customers' liability under acceptances	12,940	5,119	27	–	–	–	–	–	(24)	18,062
Derivatives	5,668	8,635	4,265	3,227	3,547	9,815	18,753	47,649	1	101,560
Other financial assets	28,296	1,400	1,193	48	61	169	277	1,861	2,164	35,469
Total financial assets	\$ 396,264	\$ 99,247	\$ 76,810	\$ 45,952	\$ 51,666	\$ 146,908	\$ 276,129	\$ 153,067	\$ 148,524	\$ 1,394,567
Other non-financial assets	2,907	1,475	108	865	109	1,373	1,507	1,696	24,328	34,368
Total assets	\$ 399,171	\$ 100,722	\$ 76,918	\$ 46,817	\$ 51,775	\$ 148,281	\$ 277,636	\$ 154,763	\$ 172,852	\$ 1,428,935
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	\$ 50,872	\$ 36,251	\$ 47,307	\$ 38,376	\$ 42,885	\$ 28,886	\$ 51,557	\$ 20,230	\$ 470,027	\$ 786,391
Secured borrowing	2,588	4,874	10,679	3,596	2,395	10,351	19,535	5,755	–	59,773
Covered bonds	–	–	4,828	–	5,255	10,818	13,263	5,677	–	39,841
Other										
Acceptances	12,944	5,119	27	–	–	–	–	–	1	18,091
Obligations related to securities sold short	35,069	–	–	–	–	–	–	–	–	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	192,855	14,281	13,462	6	–	4	–	–	5,978	226,586
Derivatives	6,325	7,779	4,519	3,430	3,442	9,155	17,348	46,515	30	98,543
Other financial liabilities	29,008	1,066	849	290	443	272	701	8,510	691	41,830
Subordinated debentures	–	–	–	–	–	–	316	9,499	–	9,815
Total financial liabilities	\$ 329,661	\$ 69,370	\$ 81,671	\$ 45,698	\$ 54,420	\$ 59,486	\$ 102,720	\$ 96,186	\$ 476,727	\$ 1,315,939
Other non-financial liabilities	1,314	5,288	276	154	142	898	903	11,179	9,217	29,371
Equity	–	–	–	–	–	–	–	–	83,625	83,625
Total liabilities and equity	\$ 330,975	\$ 74,658	\$ 81,947	\$ 45,852	\$ 54,562	\$ 60,384	\$ 103,623	\$ 107,365	\$ 569,569	\$ 1,428,935
Off-balance sheet items										
Financial guarantees	\$ 427	\$ 2,409	\$ 2,088	\$ 2,829	\$ 2,382	\$ 986	\$ 5,394	\$ 45	\$ 48	\$ 16,608
Lease commitments	69	137	204	197	198	719	1,619	3,032	–	6,175
Commitments to extend credit	2,996	6,367	8,821	10,655	11,638	41,740	150,267	27,827	3,865	264,176
Other credit-related commitments	469	934	1,615	1,863	1,365	191	634	10	92,392	99,473
Other commitments	35	–	–	–	–	–	–	–	484	519
Total off-balance sheet items	\$ 3,996	\$ 9,847	\$ 12,728	\$ 15,544	\$ 15,583	\$ 43,636	\$ 157,914	\$ 30,914	\$ 96,789	\$ 386,951

(1) Trading debt securities classified as FVTPL have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.

(2) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base for our operations and liquidity needs, as explained in the preceding Deposit and funding profile section.

Capital management

We continue to manage our capital in accordance with our Capital Management Framework as described in our 2019 Annual Report. In addition, we continue to monitor and prepare for new regulatory capital developments, including the BCBS Basel III reforms, in order to ensure timely and accurate compliance with these requirements as disclosed in the Capital management and Capital, liquidity and other regulatory developments in our 2019 Annual Report, as updated below.

OSFI expects Canadian banks to meet the Basel III targets for CET1, Tier 1 and Total capital ratios. Under Basel III, banks select from two main approaches, the Standardized Approach or the Internal ratings-based (IRB) approach, to calculate their minimum regulatory capital required to support credit, market and operational risks. Effective November 1, 2019, we adopted the Standardized Approach for consolidated regulatory reporting of operational risk as the use of the Advanced Measurement Approach was discontinued by OSFI.

The Financial Stability Board (FSB) has re-designated us as a Global Systemically Important Bank (G-SIB). This designation requires us to maintain a higher loss absorbency requirement (common equity as a percentage of risk-weighted assets) of 1%. As the Domestic Systemically Important Bank (D-SIB) requirement is equivalent to the G-SIB requirement of 1% of RWA, the G-SIB re-designation had no further impact to the loss absorbency requirements on our CET1 ratio.

The following table provides a summary of OSFI's current regulatory target ratios under Basel III and Pillar 2 requirements. We are in compliance with all current capital and leverage requirements imposed by OSFI:

Basel III capital and leverage ratios	OSFI regulatory target requirements for large banks under Basel III					RBC capital and leverage ratios as at January 31, 2020	Domestic Stability Buffer ⁽³⁾	Minimum including Capital Buffers, D-SIB/G-SIB surcharge and Domestic Stability Buffer
	Minimum	Capital Buffers ⁽¹⁾	Minimum including Capital Buffers	D-SIB/G-SIB Surcharge ⁽²⁾	Minimum including Capital Buffers and D-SIB/G-SIB surcharge ⁽²⁾			
Common Equity Tier 1	4.5%	2.5%	7.0%	1.0%	8.0%	12.0%	2.0%	10.0%
Tier 1 capital	6.0%	2.5%	8.5%	1.0%	9.5%	13.1%	2.0%	11.5%
Total capital	8.0%	2.5%	10.5%	1.0%	11.5%	14.9%	2.0%	13.5%
Leverage ratio	3.0%	n.a.	3.0%	n.a.	3.0%	4.2%	n.a.	3.0%

(1) The capital buffers include the capital conservation buffer and the countercyclical capital buffer as prescribed by OSFI.

(2) A capital surcharge, equal to the higher of our D-SIB surcharge and the BCBS's G-SIB surcharge, is applicable to risk-weighted capital.

(3) Effective April 30, 2020, OSFI has raised the level for the Domestic Stability Buffer (DSB) to 2.25% of RWA from 2.0%.

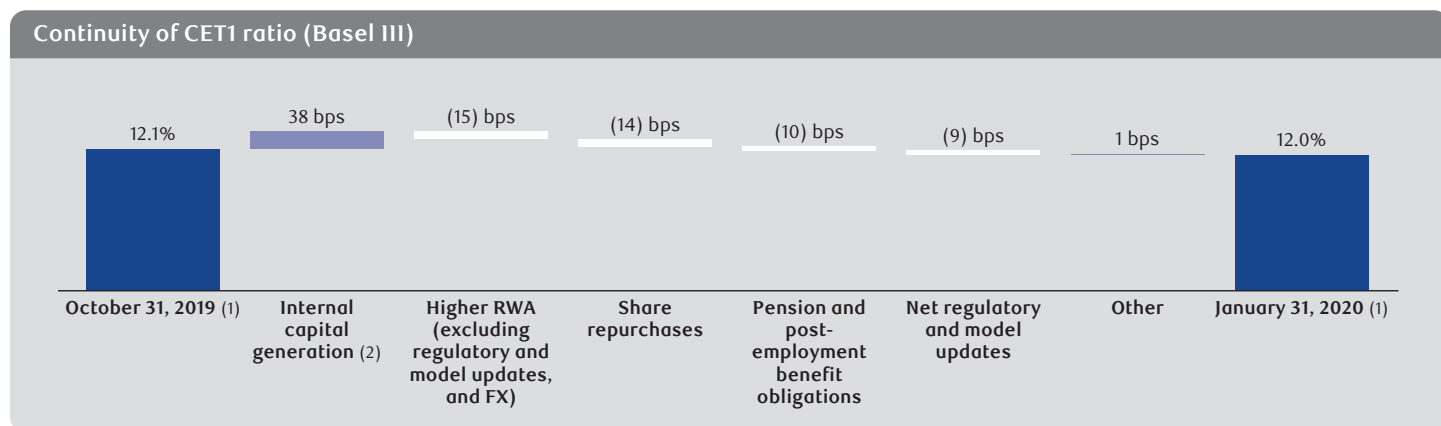
n.a. not applicable.

The following table provides details on our regulatory capital, RWA, and capital and leverage ratios. Our capital position remains strong and our capital and leverage ratios remain well above OSFI regulatory targets.

	As at		
	January 31 2020	October 31 2019	January 31 2019
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
Capital ⁽¹⁾			
CET1 capital	\$ 63,054	\$ 62,184	\$ 57,963
Tier 1 capital	68,709	67,861	64,341
Total capital	78,220	77,888	73,758
Risk-weighted Assets (RWA) used in calculation of capital ratios ⁽¹⁾			
Credit risk	\$428,067	\$ 417,835	\$ 410,003
Market risk	28,415	28,917	34,862
Operational risk	67,243	66,104	63,647
Total RWA	\$523,725	\$ 512,856	\$ 508,512
Capital ratios and Leverage ratio ⁽¹⁾			
CET1 ratio	12.0%	12.1%	11.4%
Tier 1 capital ratio	13.1%	13.2%	12.7%
Total capital ratio	14.9%	15.2%	14.5%
Leverage ratio	4.2%	4.3%	4.3%
Leverage ratio exposure (billions)	\$ 1,630	\$ 1,570	\$ 1,502

(1) Capital, RWA, and capital ratios are calculated using OSFI's (Capital Adequacy Requirements) guideline based on the Basel III framework. The Leverage ratio is calculated using OSFI Leverage Requirements Guideline based on the Basel III framework.

Q1 2020 vs. Q4 2019



(1) Represents rounded figures.

(2) Internal capital generation of \$1.9 billion which represents Net income available to shareholders, less common and preferred shares dividends.

Our CET1 ratio was 12.0%, down 10 bps from last quarter, mainly reflecting higher RWA, share repurchases, the impact of lower discount rates in determining our pension and other post-employment benefit obligations, and the impact of regulatory changes, including the impact of IFRS 16, net of normal course model updates. These factors were partially offset by internal capital generation.

Our Tier 1 capital ratio of 13.1% was down 10 bps, reflecting the factors noted above under the CET1 ratio.

Our Total capital ratio of 14.9% was down 30 bps, reflecting the factors noted above under the Tier 1 ratio. Total capital ratio was also negatively impacted by the net redemption of subordinated debentures.

RWA increased by \$11 billion, mainly driven by business growth in wholesale and personal lending and the net impact of regulatory and model updates. The regulatory and model updates reflect the unfavourable impact of the adoption of IFRS 16, and removal of allowed grandfathering and transitioning treatment for certain securitization and counterparty credit risk exposures, partially offset by the favorable impact of normal course risk parameters changes.

Our Leverage ratio of 4.2% was down 10 bps from last quarter, mainly reflecting share repurchases, the impact of lower discount rates in determining our pension and other post-employment benefit obligations, and the impact of the adoption of IFRS 16. Higher leverage exposures were largely offset by internal capital generation. The increase in leverage exposures was primarily attributable to growth in securities, repo-style transactions, retail and wholesale lending, and derivatives.

Selected capital management activity

The following table provides our selected capital management activity:

(Millions of Canadian dollars, except number of shares)	For the three months ended January 31, 2020		
	Issuance or redemption date	Number of shares (000s)	Amount
Tier 1 capital			
Common shares activity			
Issued in connection with share-based compensation plans (1)		233	\$ 18
Purchased for cancellation		(6,993)	(86)
Tier 2 capital			
Redemption of December 6, 2024 subordinated debentures (2)	December 6, 2019		\$ (2,000)
Issuance of December 23, 2029 subordinated debentures (2) (3)	December 23, 2019		1,500
Other			
Purchase and cancellation of preferred shares Series C-2 (2)	December 17, 2019	(5)	\$ (8)

(1) Amounts include cash received for stock options exercised during the period and includes fair value adjustments to stock options.

(2) For further details, refer to Note 8 of our Condensed Financial Statements.

(3) Non-Viable Contingent Capital (NVCC) instruments.

On February 27, 2019, we announced a normal course issuer bid (NCIB) to purchase up to 20 million of our common shares, commencing on March 1, 2019 and continuing until February 29, 2020, or such earlier date as we complete the repurchase of all shares permitted under the bid.

For the three-months ended January 31, 2020, the total number of common shares repurchased and cancelled under our NCIB program was approximately 7.0 million. The total cost of the shares repurchased was \$727 million.

Since the inception of the current NCIB, the total number of common shares repurchased and cancelled was approximately 13.6 million, at a cost of approximately \$1,409 million.

We determine the amount and timing of the purchases under the NCIB, subject to prior consultation with OSFI. Purchases may be made through the TSX, the NYSE and other designated exchanges and alternative Canadian trading systems. The price paid for repurchased shares is at the prevailing market price at the time of acquisition.

On December 6, 2019, we redeemed all \$2,000 million of our outstanding 2.99% subordinated debentures due on December 6, 2024 for 100% of their principal amount plus interest accrued to, but excluding, the redemption date.

On December 17, 2019, we purchased for cash 200,000 depositary shares, each representing a one-fortieth interest in a share of our Fixed Rate/Floating Rate Non-Cumulative First Preferred Shares, Series C-2 (C-2 Preferred Shares), for aggregate total consideration, including accrued dividends, of US\$6 million. The purchased depositary and underlying C-2 Preferred Shares were subsequently cancelled. The C-2 Preferred Shares do not qualify as Tier 1 regulatory capital.

On December 23, 2019, we issued \$1,500 million of NVCC subordinated debentures. The notes bear interest at a fixed rate of 2.88% per annum until December 23, 2024, and at the three-month Canadian Dollar Offered Rate (CDOR) plus 0.89% thereafter until their maturity on December 23, 2029.

Selected share data ⁽¹⁾

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at January 31, 2020		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares issued	1,423,918	\$ 17,577	\$ 1.05
Treasury shares – common shares	(706)	(72)	
Common shares outstanding	1,423,212	\$ 17,505	
Stock options and awards			
Outstanding	8,545		
Exercisable	4,104		
First preferred shares issued			
Non-cumulative Series W ⁽²⁾	12,000	\$ 300	\$ 0.31
Non-cumulative Series AA	12,000	300	0.28
Non-cumulative Series AC	8,000	200	0.29
Non-cumulative Series AE	10,000	250	0.28
Non-cumulative Series AF	8,000	200	0.28
Non-cumulative Series AG	10,000	250	0.28
Non-cumulative Series AZ ^{(3) (4)}	20,000	500	0.23
Non-cumulative Series BB ^{(3) (4)}	20,000	500	0.23
Non-cumulative Series BD ^{(3) (4)}	24,000	600	0.23
Non-cumulative Series BF ^{(3) (4)}	12,000	300	0.23
Non-cumulative Series BH ⁽⁴⁾	6,000	150	0.31
Non-cumulative Series BI ⁽⁴⁾	6,000	150	0.31
Non-cumulative Series BJ ⁽⁴⁾	6,000	150	0.33
Non-cumulative Series BK ^{(3) (4)}	29,000	725	0.34
Non-cumulative Series BM ^{(3) (4)}	30,000	750	0.34
Non-cumulative Series BO ^{(3) (4)}	14,000	350	0.30
Non-cumulative Series C-2 ⁽⁵⁾	15	23	US\$ 16.88
Preferred shares issued	227,015	\$ 5,698	
Treasury shares – preferred shares ⁽⁶⁾	11	1	
Preferred shares outstanding	227,026	\$ 5,699	
Dividends			
Common		\$ 1,496	
Preferred ⁽⁷⁾		65	

(1) For further details about our capital management activity, refer to Note 8 of our Condensed Financial Statements.

(2) Effective February 24, 2010, we have the right to convert these shares into common shares at our option, subject to certain restrictions.

(3) Dividend rate will reset every five years.

(4) NVCC instruments.

(5) Represents 615,400 depositary shares relating to preferred shares Series C-2. Each depositary share represents one-fortieth interest in a share of Series C-2.

(6) Positive amounts represent a short position in treasury shares.

(7) Dividends on preferred shares excludes distributions to non-controlling interests.

As at February 14, 2020, the number of outstanding common shares was 1,422,707,786, net of treasury shares held of 1,236,482, and the number of stock options and awards was 8,519,006.

NVCC provisions require the conversion of the capital instrument into a variable number of common shares in the event that OSFI deems a bank to be non-viable or a federal or provincial government in Canada publicly announces that a bank has accepted or agreed to accept a capital injection. If a NVCC trigger event were to occur, our NVCC capital instruments, which are the preferred shares Series AZ, BB, BD, BF, BH, BI, BJ, BK, BM, BO, and subordinated debentures due on September 29, 2026, June 4, 2025, January 20, 2026, January 27, 2026, July 25, 2029 and December 23, 2029, would be converted into RBC common shares pursuant to an automatic conversion formula with a conversion price based on the greater of: (i) a contractual floor price of \$5.00, and (ii) the current market price of our common shares at the time of the trigger event (10-day weighted average). Based on a floor price of \$5.00 and including an estimate for accrued dividends and interest, these NVCC capital instruments would convert into a maximum of 3,433 million RBC common shares, in aggregate, which would represent a dilution impact of 70.69% based on the number of RBC common shares outstanding as at January 31, 2020.

Global systemically important banks (G-SIBs) 12 assessment indicators ⁽¹⁾

The BCBS and FSB use 12 indicators in the assessment methodology for determining the systemic importance of large global banks. As noted previously, we are designated as a G-SIB. The following table provides the 12 indicators used in the G-SIB assessment:

(Millions of Canadian dollars)	As at	
	October 31 2019	October 31 2018
Cross-jurisdictional activity ⁽²⁾		
Cross-jurisdictional claims	\$ 701,483	\$ 612,292
Cross-jurisdictional liabilities	501,986	441,686
Size ⁽³⁾		
Total exposures as defined for use in the Basel III leverage ratio	1,586,125	1,467,438
Interconnectedness ⁽⁴⁾		
Intra-financial system assets	124,110	126,112
Intra-financial system liabilities	130,236	140,979
Securities outstanding	375,392	353,591
Substitutability/financial institution infrastructure ⁽⁵⁾		
Payment activity	45,107,658	42,917,581
Assets under custody	4,387,931	4,262,294
Underwritten transactions in debt and equity markets	293,438	245,992
Complexity ⁽⁶⁾		
Notional amount of over-the-counter derivatives ⁽⁷⁾	19,489,915	17,467,923
Trading and investment securities	63,309	55,855
Level 3 assets	2,568	2,549

(1) The G-SIBs indicators are prepared based on the methodology prescribed in BCBS guidelines published in July 2013 and instructions provided by BCBS in January 2020. The indicators are based on regulatory scope of consolidation, which excludes RBC Insurance® subsidiaries. For our 2019 standalone G-SIB disclosure, please refer to our Regulatory Disclosures at rbc.com/investorrelations/.

(2) Represents a bank's level of interaction outside its domestic jurisdiction.

(3) Represents the total on- and off- balance sheet exposures of the bank determined as per OSFI's Basel III leverage ratio rules before regulatory adjustments.

(4) Represents transactions with other financial institutions.

(5) Represents the extent to which the bank's services could be substituted by other institutions.

(6) Includes the level of complexity and volume of a bank's trading activities represented through derivatives, trading securities, investment securities and level 3 assets.

(7) On November 1, 2018, we prospectively implemented the standardized approach for measuring counterparty credit risk (SA-CCR) in accordance with the CAR guidelines in determining our derivative notional amounts.

Q4 2019 vs. Q4 2018

During 2019, notional amounts of over-the-counter derivatives increased mainly due to higher trading activity in interest rate swaps and foreign exchange contracts. Total exposures as defined for use in the Basel III leverage ratio increased due to client activity in our assets purchased under reverse repurchase agreements and securities borrowed, and volume growth in loans (net of allowance for loan losses). Other movements from the prior year primarily reflect normal changes in business activity.

Total loss absorbing capacity (TLAC)

On April 18, 2018, OSFI released its final guideline on Total Loss Absorbing Capacity (TLAC), which applies to Canadian D-SIBs as part of the Federal Government's Bail-in regime. The guideline is consistent with the TLAC standard released on November 9, 2015 by the FSB for institutions designated as G-SIBs, but tailored to the Canadian context. The TLAC requirement is intended to address the sufficiency of a systemically important bank's loss absorbing capacity in supporting its recapitalization in the event of its failure. TLAC is defined as the aggregate of Tier 1 capital, Tier 2 capital, and other TLAC instruments, which allow conversion in whole or in part into common shares under the CDIC Act and meet all of the eligibility criteria under the guideline.

TLAC requirements established two minimum standards, which are required to be met effective November 1, 2021: the risk-based TLAC ratio, which builds on the risk-based capital ratios described in the CAR guideline, and the TLAC leverage ratio, which builds on the leverage ratio described in OSFI's Leverage Requirements guideline. OSFI notified systemically important banks of the requirement to maintain a minimum TLAC ratio of 23.75%, which includes the revised DSB of 2.25%, effective April 30, 2020, and a TLAC leverage ratio of 6.75%. We began issuing bail-in eligible debt in the fourth quarter of 2018 and this has contributed to increasing our TLAC ratio. We expect our TLAC ratio to increase through normal course refinancing of maturing unsecured term debt.

Regulatory developments

Domestic stability buffer

On December 10, 2019, OSFI announced that the DSB will be increased from 2.0% to 2.25% of total RWA, effective April 30, 2020. This change arose from OSFI's semi-annual review of the DSB, based on its ongoing monitoring of federally regulated financial institutions as well as OSFI's view that key vulnerabilities to D-SIBs remain elevated. We do not anticipate any challenges in meeting this requirement by the effective date.

Basel III reforms – operational risk

Effective November 1, 2019, institutions are required to use the current Basel III Standardized Approach (TSA) as the use of the Advanced Measurement Approach is no longer allowed and there was no impact to our capital ratios resulting from this change. Under the Basel III reforms, OSFI revised its capital requirement for operational risk applicable to deposit taking institutions and a new Standardized Approach (SA) will be required. On January 20, 2020 OSFI extended the effective implementation date to Q1 2022 from the previous effective date of Q1 2021. We are currently assessing the expected impact on adoption.

Accounting and control matters**Summary of accounting policies and estimates**

Our Condensed Financial Statements are presented in compliance with International Accounting Standard (IAS) 34 *Interim Financial Reporting*. Our significant accounting policies are described in Note 2 of our audited 2019 Annual Consolidated Financial Statements and our Q1 2020 Condensed Financial Statements.

Changes in accounting policies and disclosures**Changes in accounting policies**

During the first quarter, we adopted IFRS 16 *Leases* (IFRS 16). As permitted by the transition provisions of IFRS 16, we elected not to restate comparative period results; accordingly, all comparative period information prior to the current quarter is presented in accordance with our previous accounting policies, as described in our 2019 Annual Report. As a result of the adoption of IFRS 16, we recognized right-of-use assets, lease liabilities and an adjustment to opening retained earnings as at November 1, 2019. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

During the first quarter, we early adopted amendments to IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement* and IFRS 7 *Financial Instruments: Disclosures (Amendments)*. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

Future changes in accounting policies and disclosures

Future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2019 Annual Consolidated Financial Statements.

Controls and procedures**Disclosure controls and procedures**

As of January 31, 2020, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the U.S. SEC. Based on that evaluation, the President and Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures were effective as of January 31, 2020.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended January 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services and operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 12 and 27 of our audited 2019 Annual Consolidated Financial Statements.

EDTF recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2019 Annual Report, Q1 2020 Report to Shareholders (RTS), Supplementary Financial Information package (SFI), and Pillar 3 Report, in accordance with recommendations from the Financial Stability Board's (FSB) Enhanced Disclosure Task Force (EDTF). Information within the SFI and Pillar 3 Report is not and should not be considered incorporated by reference into our Q1 2020 Report to Shareholders.

The following index summarizes our disclosure by EDTF recommendation:

Type of Risk	Recommendation	Disclosure	Location of disclosure		
			RTS page	Annual Report page	SFI page
General	1	Table of contents for EDTF risk disclosure	43	110	1
	2	Define risk terminology and measures		49-54, 213-214	–
	3	Top and emerging risks		47-48	–
	4	New regulatory ratios	37-38	90-94	–
Risk governance, risk management and business model	5	Risk management organization		49-54	–
	6	Risk culture		50-54	–
	7	Risk in the context of our business activities		97	–
	8	Stress testing		51-52, 66	–
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	38	90-94	–
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet		–	20-23
	11	Flow statement of the movements in regulatory capital		–	24
	12	Capital strategic planning		90-94	–
	13	RWA by business segments		–	25
	14	Analysis of capital requirement, and related measurement model information		55-58	*
	15	RWA credit risk and related risk measurements		–	*
	16	Movement of risk-weighted assets by risk type		–	25
	17	Basel back-testing		51, 55	37
Liquidity	18	Quantitative and qualitative analysis of our liquidity reserve	30-31	72-74, 78-79	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	32, 34	74, 77	–
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	36-37	79-80	–
	21	Sources of funding and funding strategy	32-33	74-76	–
	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	29-30	70-71	–
Market risk	23	Decomposition of market risk factors	26-28	66-69	–
	24	Market risk validation and back-testing		66	–
	25	Primary risk management techniques beyond reported risk measures and parameters		66-69	–
	26	Bank's credit risk profile	19-25	54-65, 156-163	26-37,*
Credit risk		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	59-62	104-109	*
	27	Policies for identifying impaired loans		56-58, 99-100, 129-132	–
	28	Reconciliation of the opening and closing balances of impaired loans and impairment allowances during the year		–	28, 33
	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		59	39
	30	Credit risk mitigation, including collateral held for all sources of credit risk		57-58	36
	31	Other risk types		82-89	–
Other	32	Publicly known risk events		85-86, 201-202	–

* These disclosure requirements are satisfied or partially satisfied by disclosures provided in our Pillar 3 Report for the quarter ended January 31, 2020 and for the year ended October 31, 2019.

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	January 31 2020	October 31 2019
Assets		
Cash and due from banks	\$ 34,120	\$ 26,310
Interest-bearing deposits with banks	31,331	38,345
Securities		
Trading	145,015	146,534
Investment, net of applicable allowance (Note 4)	121,652	102,470
	266,667	249,004
Assets purchased under reverse repurchase agreements and securities borrowed	324,187	306,961
Loans (Note 5)		
Retail	430,841	426,086
Wholesale	202,238	195,870
	633,079	621,956
Allowance for loan losses (Note 5)	(3,139)	(3,100)
	629,940	618,856
Segregated fund net assets	1,788	1,663
Other		
Customers' liability under acceptances	18,801	18,062
Derivatives	93,982	101,560
Premises and equipment	8,257	3,191
Goodwill	11,288	11,236
Other intangibles	4,641	4,674
Other assets	51,302	49,073
	188,271	187,796
Total assets	\$ 1,476,304	\$ 1,428,935
Liabilities and equity		
Deposits (Note 6)		
Personal	\$ 302,002	\$ 294,732
Business and government	569,236	565,482
Bank	31,046	25,791
	902,284	886,005
Segregated fund net liabilities	1,788	1,663
Other		
Acceptances	18,844	18,091
Obligations related to securities sold short	35,624	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	254,391	226,586
Derivatives	94,611	98,543
Insurance claims and policy benefit liabilities	12,259	11,401
Other liabilities	63,173	58,137
	478,902	447,827
Subordinated debentures (Note 8)	9,269	9,815
Total liabilities	1,392,243	1,345,310
Equity attributable to shareholders		
Preferred shares (Note 8)	5,699	5,707
Common shares (Note 8)	17,505	17,587
Retained earnings	56,279	55,981
Other components of equity	4,472	4,248
	83,955	83,523
Non-controlling interests	106	102
Total equity	84,061	83,625
Total liabilities and equity	\$ 1,476,304	\$ 1,428,935

The accompanying notes are an integral part of these Interim Condensed Consolidated Financial Statements.

Interim Condensed Consolidated Statements of Income (unaudited)

(Millions of Canadian dollars, except per share amounts)	For the three months ended	
	January 31 2020	January 31 2019
Interest and dividend income (Note 3)		
Loans	\$ 6,358	\$ 6,160
Securities	1,742	1,696
Assets purchased under reverse repurchase agreements and securities borrowed	2,009	2,148
Deposits and other	129	145
	10,238	10,149
Interest expense (Note 3)		
Deposits and other	3,020	3,262
Other liabilities	1,914	1,948
Subordinated debentures	83	92
	5,017	5,302
Net interest income	5,221	4,847
Non-interest income		
Insurance premiums, investment and fee income	1,994	1,579
Trading revenue	458	395
Investment management and custodial fees	1,535	1,450
Mutual fund revenue	946	873
Securities brokerage commissions	318	342
Service charges	488	468
Underwriting and other advisory fees	627	345
Foreign exchange revenue, other than trading	253	249
Card service revenue	287	282
Credit fees	360	315
Net gains on investment securities	11	46
Share of profit in joint ventures and associates	22	15
Other	316	383
	7,615	6,742
Total revenue	12,836	11,589
Provision for credit losses (Notes 4 and 5)	419	514
Insurance policyholder benefits, claims and acquisition expense	1,614	1,225
Non-interest expense		
Human resources (Note 7)	4,060	3,643
Equipment	462	431
Occupancy	397	397
Communications	250	240
Professional fees	284	305
Amortization of other intangibles	303	290
Other	622	606
	6,378	5,912
Income before income taxes	4,425	3,938
Income taxes	916	766
Net income	\$ 3,509	\$ 3,172
Net income attributable to:		
Shareholders	\$ 3,504	\$ 3,170
Non-controlling interests	5	2
	\$ 3,509	\$ 3,172
Basic earnings per share (in dollars) (Note 9)	\$ 2.41	\$ 2.15
Diluted earnings per share (in dollars) (Note 9)	2.40	2.15
Dividends per common share (in dollars)	1.05	0.98

The accompanying notes are an integral part of these Interim Condensed Consolidated Financial Statements.

Interim Condensed Consolidated Statements of Comprehensive Income (unaudited)

(Millions of Canadian dollars)	For the three months ended	
	January 31 2020	January 31 2019
Net income	\$ 3,509	\$ 3,172
Other comprehensive income (loss), net of taxes		
Items that will be reclassified subsequently to income:		
Net change in unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income		
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	183	(1)
Provision for credit losses recognized in income	(1)	(1)
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(9)	(29)
	173	(31)
Foreign currency translation adjustments		
Unrealized foreign currency translation gains (losses)	411	35
Net foreign currency translation gains (losses) from hedging activities	(178)	(66)
Reclassification of losses (gains) on foreign currency translation to income	–	2
Reclassification of losses (gains) on net investment hedging activities to income	–	2
	233	(27)
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	(174)	(316)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(8)	(74)
	(182)	(390)
Items that will not be reclassified subsequently to income:		
Remeasurements of employee benefit plans (Note 7)	(469)	(394)
Net fair value change due to credit risk on financial liabilities designated as fair value through profit or loss	(109)	163
Net gains (losses) on equity securities designated at fair value through other comprehensive income	1	7
	(577)	(224)
Total other comprehensive income (loss), net of taxes	(353)	(672)
Total comprehensive income (loss)	\$ 3,156	\$ 2,500
Total comprehensive income attributable to:		
Shareholders	\$ 3,151	\$ 2,497
Non-controlling interests	5	3
	\$ 3,156	\$ 2,500

The income tax effect on the Interim Condensed Consolidated Statements of Comprehensive Income is shown in the table below.

(Millions of Canadian dollars)	For the three months ended	
	January 31 2020	January 31 2019
Income taxes on other comprehensive income		
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ 55	\$ (4)
Provision for credit losses recognized in income	–	–
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(3)	(17)
Unrealized foreign currency translation gains (losses)	–	1
Net foreign currency translation gains (losses) from hedging activities	(62)	(24)
Reclassification of losses (gains) on net investment hedging activities to income	–	1
Net gains (losses) on derivatives designated as cash flow hedges	(63)	(113)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(3)	(27)
Remeasurements of employee benefit plans	(167)	(125)
Net fair value change due to credit risk on financial liabilities designated as fair value through profit or loss	(39)	59
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(2)	(1)
Total income tax expenses (recoveries)	\$ (284)	\$ (250)

The accompanying notes are an integral part of these Interim Condensed Consolidated Financial Statements.

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The accompanying notes are an integral part of these Interim Condensed Consolidated Financial Statements.

Interim Condensed Consolidated Statements of Cash Flows (unaudited)

(Millions of Canadian dollars)	For the three months ended	
	January 31 2020	January 31 2019
Cash flows from operating activities		
Net income	\$ 3,509	\$ 3,172
Adjustments for non-cash items and others		
Provision for credit losses	419	514
Depreciation	333	150
Deferred income taxes	14	(171)
Amortization and impairment of other intangibles	311	293
Net changes in investments in joint ventures and associates	(22)	(15)
Losses (Gains) on investment securities	(12)	(49)
Losses (Gains) on disposition of businesses	8	–
Adjustments for net changes in operating assets and liabilities		
Insurance claims and policy benefit liabilities	858	512
Net change in accrued interest receivable and payable	(98)	122
Current income taxes	(255)	(159)
Derivative assets	7,578	9,223
Derivative liabilities	(3,932)	(8,472)
Trading securities	1,504	(9,915)
Loans, net of securitizations	(11,635)	(13,151)
Assets purchased under reverse repurchase agreements and securities borrowed	(17,226)	(3,058)
Obligations related to assets sold under repurchase agreements and securities loaned	27,805	17,715
Obligations related to securities sold short	555	995
Deposits, net of securitizations	17,236	15,482
Brokers and dealers receivable and payable	(644)	(478)
Other	(6,362)	(1,483)
Net cash from (used in) operating activities	19,944	11,227
Cash flows from investing activities		
Change in interest-bearing deposits with banks	7,016	(2,182)
Proceeds from sales and maturities of investment securities	16,804	18,304
Purchases of investment securities	(35,200)	(20,668)
Net acquisitions of premises and equipment and other intangibles	(745)	(561)
Net cash from (used in) investing activities	(12,125)	(5,107)
Cash flows from financing activities		
Issuance of subordinated debentures	1,500	–
Repayment of subordinated debentures	(2,000)	–
Issue of common shares, net of issuance costs	16	9
Common shares purchased for cancellation	(727)	(348)
Issue of preferred shares, net of issuance costs	–	350
Redemption of preferred shares	(8)	(250)
Sales of treasury shares	1,599	1,611
Purchases of treasury shares	(1,613)	(1,632)
Dividends paid	(1,567)	(1,483)
Dividends/distributions paid to non-controlling interests	(1)	–
Change in short-term borrowings of subsidiaries	2,779	4,860
Repayment of lease liabilities	(141)	–
Net cash from (used in) financing activities	(163)	3,117
Effect of exchange rate changes on cash and due from banks	154	587
Net change in cash and due from banks	7,810	9,824
Cash and due from banks at beginning of period ⁽¹⁾	26,310	30,209
Cash and due from banks at end of period ⁽¹⁾	\$ 34,120	\$ 40,033
Cash flows from operating activities include:		
Amount of interest paid ⁽¹⁾	\$ 4,757	\$ 4,748
Amount of interest received	9,751	9,660
Amount of dividends received	658	493
Amount of income taxes paid	875	791

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2.5 billion as at January 31, 2020 (October 31, 2019 – \$2.6 billion; January 31, 2019 – \$2.3 billion; October 31, 2018 – \$2.4 billion).

The accompanying notes are an integral part of these Interim Condensed Consolidated Financial Statements.

Note 1 General information

Our unaudited Interim Condensed Consolidated Financial Statements (Condensed Financial Statements) are presented in compliance with International Accounting Standard (IAS) 34 *Interim Financial Reporting*. The Condensed Financial Statements do not include all the information and disclosures required in the annual financial statements and should be read in conjunction with our audited 2019 Annual Consolidated Financial Statements and the accompanying notes included on pages 111 to 211 in our 2019 Annual Report. Tabular information is stated in millions of Canadian dollars, except per share amounts and percentages. On February 20, 2020, the Board of Directors authorized the Condensed Financial Statements for issue.

Note 2 Summary of significant accounting policies, estimates and judgments

Except as indicated below, the Condensed Financial Statements have been prepared using the same accounting policies and methods used in preparation of our audited 2019 Annual Consolidated Financial Statements. Our significant accounting policies and future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2019 Annual Consolidated Financial Statements.

Changes in accounting policies

Leases

During the first quarter, we adopted IFRS 16 *Leases* (IFRS 16), which sets out principles for the recognition, measurement, presentation and disclosure of leases, replacing the previous accounting standard for leases, IAS 17 *Leases* (IAS 17). As a result of the application of IFRS 16, we changed our accounting policy for leasing as outlined below, applicable from November 1, 2019. As permitted by the transition provisions of IFRS 16, we elected not to restate comparative period results; accordingly, all comparative information is presented in accordance with our previous accounting policies, as described in our 2019 Annual Report.

As a result of the adoption of IFRS 16, we increased total assets by \$5,084 million and total liabilities by \$5,191 million, primarily representing leases of premises and equipment previously classified as operating leases, and reduced retained earnings by \$107 million, net of taxes. The adoption of IFRS 16 reduced our CET1 capital ratio by 14 bps.

Leasing

At inception of a contract, we assess whether a contract is or contains a lease. A contract is, or contains, a lease if the contract conveys the right to obtain substantially all of the economic benefits from, and direct the use of, an identified asset for a period of time in return for consideration.

When we are the lessee in a lease arrangement, we initially record a right-of-use asset and corresponding lease liability, except for short-term leases and leases of low-value assets. Short-term leases are leases with a lease term of 12 months or less. Low-value assets are unspecialized, common, technologically unsophisticated, widely available, and widely used non-infrastructure assets. For short-term leases and leases of low-value assets, we record the lease payments as an operating expense on a straight-line basis over the lease term.

Where we are reasonably certain to exercise extension and termination options, they are included in the lease term.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted at our incremental borrowing rate. The lease liability is subsequently measured at amortized cost using the effective interest method, recorded in Interest expense.

The right-of-use asset is initially measured based on the initial amount of the lease liability, adjusted for lease payments made on or before the commencement date, initial direct costs incurred, and an estimate of costs to dismantle, remove, or restore the asset, less any lease incentives received.

The right-of-use asset is depreciated to the earlier of the lease term and the useful life, unless ownership will transfer to RBC or we are reasonably certain to exercise a purchase option, in which case the useful life of the right-of-use asset is used. We apply IAS 36 *Impairment of assets* to determine whether a right-of-use asset is impaired and account for any identified impairment loss as described in the premises and equipment accounting policies in our 2019 Annual Report.

Impact of adoption of IFRS 16 – Leases previously classified as operating leases

At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at our incremental borrowing rate as at November 1, 2019. We applied a weighted-average incremental borrowing rate of 2.3%. Right-of-use assets are generally measured at an amount equal to the lease liability, adjusted by any prepaid or accrued lease payments. For a select number of properties, the right-of-use assets were measured as if IFRS 16 had been applied since the commencement date of the lease, discounted using our incremental borrowing rate as at November 1, 2019. The following practical expedients were adopted when applying IFRS 16 to leases previously classified as operating leases under IAS 17:

- Election to not separate lease and non-lease components, applied to our real estate leases; and
- Exemption from recognition for short-term and low value leases.

Note 2 Summary of significant accounting policies, estimates and judgments (continued)

The following table reconciles our operating lease commitments at October 31, 2019, as previously disclosed in our 2019 Annual Consolidated Financial Statements, to the lease obligations recognized on initial application of IFRS 16 at November 1, 2019.

(Millions of Canadian dollars)	
Lease commitments disclosed as at October 31, 2019	\$ 6,175
Less: commitments related to non-recoverable tax	(360)
Less: commitments for contracts not yet commenced	(240)
Less: recognition exemption adopted for short-term and low-value leases	(83)
Plus: commitments for renewal options reasonably certain to be exercised	977
Other	(26)
Adjusted operating lease commitments as at October 31, 2019	6,443
Discounted as at November 1, 2019	5,557
Finance lease liabilities recognized as at October 31, 2019	49
Lease liability recognized as at November 1, 2019	\$5,606

Impact of adoption of IFRS 16 – Leases previously classified as finance leases

The carrying amount of the right-of-use asset and lease liability at November 1, 2019 for leases previously classified as finance leases under IAS 17 *Leases* was determined to be equal to the carrying amount of the lease asset and liability under IAS 17 immediately before the transition date.

Interest Rate Benchmark Reform

During the first quarter, we early adopted amendments to IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement* and IFRS 7 *Financial Instruments: Disclosures* (Amendments), applicable from November 1, 2019. These amendments modify certain hedge accounting requirements to provide relief from the effect of uncertainty caused by interest rate benchmark reform (the Reform) prior to the transition to alternative interest rates. The adoption of the Amendments had no impact to our consolidated financial statements.

We will cease to apply these Amendments as interbank offered rate (IBOR) based cash flows transition to new risk free rates or when the hedging relationships to which the relief is applied are discontinued.

Hedge Accounting

Our accounting policies relating to hedge accounting are described in Note 2 and Note 8 of our 2019 Annual Report. We apply hedge accounting when designated hedging instruments are 'highly effective' in offsetting changes in the fair value or cash flows of the hedged items at inception and on an ongoing basis. We perform retrospective assessments to demonstrate that the relationship has been effective since designation of the hedge and prospective assessments to evaluate whether the hedge is expected to be effective over the remaining term of the hedge. While uncertainty due to IBOR reform exists, our prospective effectiveness testing is based on existing hedged cash flows or hedged risks. Any ineffectiveness arising from retrospective testing is recognized in net income.

In addition to potential sources of ineffectiveness outlined in Note 8 of our 2019 Annual Report, the Reform may result in ineffectiveness as the transition of hedged items and related hedging instruments from IBORs to new risk free rates may occur at different times. This may result in different impacts on the valuation or cash flow variability of hedged items and related hedging instruments.

Cash flow hedges

We apply hedge accounting for cash flow hedges when the cash flows giving rise to the risk being hedged have a high probability of occurring. While uncertainty due to IBOR reform exists, we apply the relief provided by the Amendments that the IBOR benchmarks, on which the highly probable hedged cash flows are based, are not altered as a result of the Reform. In addition, associated cash flow hedge reserves are not recycled into net income solely due to changes related to the transition from IBOR to new risk free rates.

Fair value hedges

We apply hedge accounting to IBOR rates which may not be contractually specified when that rate is separately identifiable and reliably measurable at inception of the hedge relationship.

Hedging relationships impacted by interest rate benchmark reform

The following table presents the notional amount of our hedging instruments which reference IBOR that will expire after 2021 and will be affected by the Reform. The notional amounts of our hedging instruments also approximates the extent of the risk exposure we manage through hedging relationships:

(Millions of Canadian dollars)	As at November 1, 2019	
	Notional/Principal amounts (1)	
Interest rate contracts		
USD LIBOR	\$	26,709
EURO Interbank Offered Rate		5,589
GBP LIBOR		618
Non-derivative instruments		
USD LIBOR		888
GBP LIBOR		682
	\$	34,486

(1) Excludes interest rate contracts and non-derivative instruments which reference rates in multi-rate jurisdictions, including the Canadian Dollar Offered Rate (CDOR) and Australian Bank Bill Swap Rate (BBSW).

IFRS Interpretations Committee Interpretation 23 *Uncertainty over income tax treatments* (IFRIC 23)

During the first quarter, we adopted IFRIC 23 which provides guidance on the recognition and measurement of tax assets and liabilities under IAS 12 *Income taxes* when there is uncertainty over income tax treatments, replacing our application of IAS 37 *Provisions, contingent liabilities and contingent assets* for uncertain tax positions. We are subject to income tax laws in various jurisdictions where we operate, and the complex tax laws are potentially subject to different interpretations by us and the relevant taxation authorities. Significant judgment is required in the interpretation of the relevant tax laws, and in assessing the probability of acceptance of our tax positions, which includes our best estimate of tax positions that are under audit or appeal by relevant taxation authorities. We perform a review on a quarterly basis to incorporate our best assessment based on information available, but additional liability and income tax expense could result based on the acceptance of our positions by the relevant tax authorities. The adoption of IFRIC 23 had no impact to our consolidated financial statements.

IFRS 15 Revenue from Contracts with Customers (IFRS 15)

On November 1, 2018, we adopted IFRS 15 and reduced our opening retained earnings. In the fourth quarter of 2019, we amended our opening reduction to retained earnings to \$94 million on an after-tax basis. Comparative amounts have been revised from those previously presented.

Note 3 Fair value of financial instruments

Carrying value and fair value of financial instruments

The following tables provide a comparison of the carrying and fair values for each classification of financial instruments. Embedded derivatives are presented on a combined basis with the host contracts. Refer to Note 2 and Note 3 of our audited 2019 Annual Consolidated Financial Statements for a description of the valuation techniques and inputs used in the fair value measurement of our financial instruments. There have been no significant changes to our determination of fair value during the quarter.

	As at January 31, 2020							
	Carrying value and fair value				Carrying value	Fair value	Total carrying amount	Total fair value
	Financial instruments classified as FVTPL	Financial instruments designated as FVTPL	Financial instruments classified as FVOCI	Financial instruments designated as FVOCI	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost		
(Millions of Canadian dollars)								
Financial assets								
Interest-bearing deposits with banks	\$ –	\$ 19,151	\$ –	\$ –	\$ 12,180	\$ 12,180	\$ 31,331	\$ 31,331
Securities								
Trading	135,110	9,905	–	–	–	–	145,015	145,015
Investment, net of applicable allowance	–	–	76,942	522	44,188	44,623	121,652	122,087
	135,110	9,905	76,942	522	44,188	44,623	266,667	267,102
Assets purchased under reverse repurchase agreements and securities borrowed	261,216	–	–	–	62,971	62,972	324,187	324,188
Loans, net of applicable allowance								
Retail	282	252	95	–	428,194	429,591	428,823	430,220
Wholesale	8,776	1,973	449	–	189,919	189,599	201,117	200,797
	9,058	2,225	544	–	618,113	619,190	629,940	631,017
Other								
Derivatives	93,982	–	–	–	–	–	93,982	93,982
Other assets (1)	3,053	–	–	–	51,146	51,145	54,199	54,198
Financial liabilities								
Deposits								
Personal	\$ 125	\$ 17,109			\$ 284,768	\$ 284,896	\$ 302,002	\$ 302,130
Business and government (2)	260	117,572			451,404	452,781	569,236	570,613
Bank (3)	–	3,450			27,596	27,614	31,046	31,064
	385	138,131			763,768	765,291	902,284	903,807
Other								
Obligations related to securities sold short	35,624	–			–	–	35,624	35,624
Obligations related to assets sold under repurchase agreements and securities loaned	–	247,170			7,221	7,221	254,391	254,391
Derivatives	94,611	–			–	–	94,611	94,611
Other liabilities (4)	(1,484)	71			61,838	61,826	60,425	60,413
Subordinated debentures	–	–			9,269	9,401	9,269	9,401

	As at October 31, 2019							
	Carrying value and fair value				Carrying value	Fair value	Total carrying amount	Total fair value
	Financial instruments classified as FVTPL	Financial instruments designated as FVTPL	Financial instruments classified as FVOCI	Financial instruments designated as FVOCI	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost		
(Millions of Canadian dollars)								
Financial assets								
Interest-bearing deposits with banks	\$ –	\$ 22,283	\$ –	\$ –	\$ 16,062	\$ 16,062	\$ 38,345	\$ 38,345
Securities								
Trading	137,600	8,934	–	–	–	–	146,534	146,534
Investment, net of applicable allowance	–	–	57,223	463	44,784	45,104	102,470	102,790
	137,600	8,934	57,223	463	44,784	45,104	249,004	249,324
Assets purchased under reverse repurchase agreements and securities borrowed	246,068	–	–	–	60,893	60,894	306,961	306,962
Loans, net of applicable allowance								
Retail	275	242	95	–	423,469	424,416	424,081	425,028
Wholesale	7,055	1,856	451	–	185,413	184,645	194,775	194,007
	7,330	2,098	546	–	608,882	609,061	618,856	619,035
Other								
Derivatives	101,560	–	–	–	–	–	101,560	101,560
Other assets (1)	3,156	–	–	–	50,375	50,375	53,531	53,531
Financial liabilities								
Deposits								
Personal	\$ 140	\$ 17,394			\$ 277,198	\$ 277,353	\$ 294,732	\$ 294,887
Business and government (2)	151	111,389			453,942	452,536	565,482	564,076
Bank (3)	–	3,032			22,759	22,773	25,791	25,805
	291	131,815			753,899	752,662	886,005	884,768
Other								
Obligations related to securities sold short	35,069	–			–	–	35,069	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	–	218,612			7,974	7,974	226,586	226,586
Derivatives	98,543	–			–	–	98,543	98,543
Other liabilities (4)	(1,209)	91			61,039	61,024	59,921	59,906
Subordinated debentures	–	–			9,815	9,930	9,815	9,930

(1) Includes Customers' liability under acceptances and financial instruments recognized in Other assets.

(2) Business and government deposits include deposits from regulated deposit-taking institutions other than banks.

(3) Bank deposits refer to deposits from regulated banks and central banks.

(4) Includes Acceptances and financial instruments recognized in Other liabilities.

Note 3 Fair value of financial instruments (continued)**Fair value of assets and liabilities measured at fair value on a recurring basis and classified using the fair value hierarchy**

(Millions of Canadian dollars)	As at									
	January 31, 2020					October 31, 2019				
	Fair value measurements using			Netting	Fair value	Fair value measurements using			Netting	Fair value
	Level 1	Level 2	Level 3	adjustments		Level 1	Level 2	Level 3	adjustments	
Financial assets										
Interest-bearing deposits with banks	\$ –	\$ 19,151	\$ –	\$ –	\$ 19,151	\$ –	\$ 22,283	\$ –	\$ –	\$ 22,283
Securities										
Trading										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	13,923	6,361	–	–	20,284	14,655	5,474	–	–	20,129
Provincial and municipal	–	13,445	–	–	13,445	–	11,282	–	–	11,282
U.S. state, municipal and agencies (1)	774	31,557	55	–	32,386	2,050	39,584	58	–	41,692
Other OECD government (2)	3,600	3,154	–	–	6,754	2,786	3,710	–	–	6,496
Mortgage-backed securities (1)	–	498	–	–	498	–	482	–	–	482
Asset-backed securities										
Non-CDO securities (3)	–	1,397	2	–	1,399	–	1,333	2	–	1,335
Corporate debt and other debt	–	25,342	19	–	25,361	1	23,643	21	–	23,665
Equities	41,576	2,076	1,236	–	44,888	38,309	1,925	1,219	–	41,453
	59,873	83,830	1,312	–	145,015	57,801	87,433	1,300	–	146,534
Investment										
Debt issued or guaranteed by:										
Canadian government (1)										
Federal	–	976	–	–	976	–	657	–	–	657
Provincial and municipal	–	3,514	–	–	3,514	–	2,898	–	–	2,898
U.S. state, municipal and agencies (1)	126	34,958	–	–	35,084	210	20,666	–	–	20,876
Other OECD government	–	4,148	–	–	4,148	–	4,251	–	–	4,251
Mortgage-backed securities (1)	–	2,866	27	–	2,893	–	2,675	27	–	2,702
Asset-backed securities										
CDO	–	6,893	–	–	6,893	–	7,300	–	–	7,300
Non-CDO securities	–	828	–	–	828	–	849	–	–	849
Corporate debt and other debt	–	22,449	158	–	22,607	–	17,537	153	–	17,690
Equities	43	185	293	–	521	42	127	294	–	463
	169	76,817	478	–	77,464	252	56,960	474	–	57,686
Assets purchased under reverse repurchase agreements and securities borrowed	–	261,216	–	–	261,216	–	246,068	–	–	246,068
Loans	–	10,832	995	–	11,827	–	9,294	680	–	9,974
Other										
Derivatives										
Interest rate contracts	1	46,500	422	–	46,923	1	46,095	349	–	46,445
Foreign exchange contracts	–	32,273	68	–	32,341	–	40,768	48	–	40,816
Credit derivatives	–	219	–	–	219	–	169	–	–	169
Other contracts	2,556	13,154	36	–	15,746	2,852	12,674	11	–	15,537
Valuation adjustments	–	(708)	3	–	(705)	–	(712)	15	–	(697)
Total gross derivatives	2,557	91,438	529	–	94,524	2,853	98,994	423	–	102,270
Netting adjustments	–	–	–	(542)	(542)	–	–	–	(710)	(710)
Total derivatives	–	–	–	–	93,982	–	–	–	–	101,560
Other assets	1,339	1,634	80	–	3,053	1,119	1,960	77	–	3,156
	\$63,938	\$544,918	\$3,394	\$ (542)	\$611,708	\$ 62,025	\$ 522,992	\$ 2,954	\$ (710)	\$ 587,261
Financial Liabilities										
Deposits										
Personal	\$ –	\$ 16,966	\$ 268	\$ –	\$ 17,234	\$ –	\$ 17,378	\$ 156	\$ –	\$ 17,534
Business and government	–	117,832	–	–	117,832	–	111,540	–	–	111,540
Bank	–	3,450	–	–	3,450	–	3,032	–	–	3,032
Other										
Obligations related to securities sold short	17,544	18,080	–	–	35,624	20,512	14,557	–	–	35,069
Obligations related to assets sold under repurchase agreements and securities loaned	–	247,170	–	–	247,170	–	218,612	–	–	218,612
Derivatives										
Interest rate contracts	–	39,622	1,032	–	40,654	–	39,165	934	–	40,099
Foreign exchange contracts	–	34,373	43	–	34,416	–	40,183	27	–	40,210
Credit derivatives	–	393	–	–	393	–	282	–	–	282
Other contracts	2,560	17,026	191	–	19,777	2,675	15,776	206	–	18,657
Valuation adjustments	–	(74)	(13)	–	(87)	–	12	(7)	–	5
Total gross derivatives	2,560	91,340	1,253	–	95,153	2,675	95,418	1,160	–	99,253
Netting adjustments	–	–	–	(542)	(542)	–	–	–	(710)	(710)
Total derivatives	–	–	–	–	94,611	–	–	–	–	98,543
Other liabilities	57	(1,529)	59	–	(1,413)	102	(1,280)	60	–	(1,118)
	\$20,161	\$493,309	\$1,580	\$ (542)	\$514,508	\$ 23,289	\$ 459,257	\$ 1,376	\$ (710)	\$ 483,212

(1) As at January 31, 2020, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$20,009 million and \$nil (October 31, 2019 – \$22,365 million and \$nil), respectively, and in all fair value levels of Investment securities were \$9,168 million and \$2,099 million (October 31, 2019 – \$6,474 million and \$2,046 million), respectively.

(2) OECD stands for Organisation for Economic Co-operation and Development.

(3) CDO stands for collateralized debt obligations.

Fair value measurements using significant unobservable inputs (Level 3 Instruments)

A financial instrument is classified as Level 3 in the fair value hierarchy if one or more of its unobservable inputs may significantly affect the measurement of its fair value. In preparing the financial statements, appropriate levels for these unobservable input parameters are chosen so that they are consistent with prevailing market evidence or management judgment. Due to the unobservable nature of the prices or rates, there may be uncertainty about the valuation of these Level 3 financial instruments.

During the three months ended January 31, 2020, there were no significant changes made to the valuation techniques and ranges and weighted averages of unobservable inputs used in the determination of fair value of Level 3 financial instruments. As at January 31, 2020, the impacts of adjusting one or more of the unobservable inputs by reasonably possible alternative assumptions did not change significantly from the impacts disclosed in our 2019 Annual Consolidated Financial Statements.

Changes in fair value measurement for instruments measured on a recurring basis and categorized in Level 3

(Millions of Canadian dollars)	For the three months ended January 31, 2020									
	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	(losses) included in earnings for positions still held	Gains
Assets										
Securities										
Trading										
Debt issued or guaranteed by:										
U.S. state, municipal and agencies	\$ 58	\$ –	\$ –	\$ –	\$ (3)	\$ –	\$ –	\$ 55	\$ –	
Asset-backed securities										
Non-CDO securities	2	–	–	–	–	–	–	2	–	
Corporate debt and other debt	21	(1)	–	–	(1)	–	–	19	(1)	
Equities	1,219	(27)	4	71	(28)	–	(3)	1,236	(9)	
	1,300	(28)	4	71	(32)	–	(3)	1,312	(10)	
Investment										
Mortgage-backed securities	27	–	–	–	–	–	–	27	n.a.	
Corporate debt and other debt	153	–	5	–	–	–	–	158	n.a.	
Equities	294	–	–	–	(1)	–	–	293	n.a.	
	474	–	5	–	(1)	–	–	478	n.a.	
Loans	680	26	–	318	(9)	8	(28)	995	28	
Other										
Net derivative balances (3)										
Interest rate contracts	(585)	4	–	(36)	1	–	6	(610)	4	
Foreign exchange contracts	21	1	–	11	–	(5)	(3)	25	(1)	
Other contracts	(195)	(15)	1	(2)	8	(10)	58	(155)	(8)	
Valuation adjustments	22	–	–	–	(6)	–	–	16	–	
Other assets	77	7	–	–	(4)	–	–	80	7	
	\$ 1,794	\$ (5)	\$ 10	\$ 362	\$ (43)	\$ (7)	\$ 30	\$ 2,141	\$ 20	
Liabilities										
Deposits										
Personal	\$ (156)	\$ (1)	\$ –	\$ (174)	\$ 10	\$ (16)	\$ 69	\$ (268)	\$ 3	
Business and government	–	–	–	–	–	–	–	–	–	
Other										
Other liabilities	(60)	(4)	–	3	2	–	–	(59)	(4)	
	\$ (216)	\$ (5)	\$ –	\$ (171)	\$ 12	\$ (16)	\$ 69	\$ (327)	\$ (1)	

Note 3 Fair value of financial instruments (continued)

For the three months ended January 31, 2019										
(Millions of Canadian dollars)	Fair value at beginning of period	Gains (losses) included in earnings	Gains (losses) included in OCI (1)	Purchases (issuances)	Settlement (sales) and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Gains (losses) included in earnings for positions still held	
Assets										
Securities										
Trading										
Debt issued or guaranteed by:										
U.S. state, municipal and agencies	\$ 66	\$ (1)	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 65	\$ –	
Asset-backed securities										
Non-CDO securities	110	15	–	–	(116)	–	–	9	1	
Corporate debt and other debt	21	1	–	–	–	–	–	22	–	
Equities	1,148	(18)	–	80	(143)	9	–	1,076	(5)	
	1,345	(3)	–	80	(259)	9	–	1,172	(4)	
Investment										
Mortgage-backed securities	–	–	–	27	–	–	–	27	n.a.	
Corporate debt and other debt	192	(3)	2	–	(56)	–	–	135	n.a.	
Equities	237	–	10	–	–	–	–	247	n.a.	
	429	(3)	12	27	(56)	–	–	409	n.a.	
Loans	551	17	1	264	(2)	–	(5)	826	16	
Other										
Net derivative balances (3)										
Interest rate contracts	(504)	(68)	–	–	40	2	(20)	(550)	(6)	
Foreign exchange contracts	21	(7)	6	2	–	(1)	(9)	12	(1)	
Other contracts	(84)	45	–	(9)	(23)	(17)	(14)	(102)	60	
Valuation adjustments	1	–	–	–	12	–	–	13	–	
Other assets	65	–	–	–	(4)	–	–	61	–	
	\$ 1,824	\$ (19)	\$ 19	\$ 364	\$ (292)	\$ (7)	\$ (48)	\$ 1,841	\$ 65	
Liabilities										
Deposits										
Personal	\$ (390)	\$ (30)	\$ (1)	\$ (9)	\$ 5	\$ (18)	\$ 352	\$ (91)	\$ 2	
Business and government	5	–	–	–	–	–	(5)	–	–	
Other										
Other liabilities	(68)	–	–	–	16	–	–	(52)	1	
	\$ (453)	\$ (30)	\$ (1)	\$ (9)	\$ 21	\$ (18)	\$ 347	\$ (143)	\$ 3	

(1) These amounts include the foreign currency translation gains or losses arising on consolidation of foreign subsidiaries relating to the Level 3 instruments, where applicable. The unrealized gains on Investment securities recognized in OCI were \$4 million for the three months ended January 31, 2020 (January 31, 2019 – gains of \$11 million), excluding the translation gains or losses arising on consolidation.

(2) Other includes amortization of premiums or discounts recognized in net income.

(3) Net derivatives as at January 31, 2020 included derivative assets of \$529 million (January 31, 2019 – \$420 million) and derivative liabilities of \$1,253 million (January 31, 2019 – \$1,047 million).

n.a. not applicable

Transfers between fair value hierarchy levels for instruments carried at fair value on a recurring basis

Transfers between Level 1 and Level 2, and transfers into and out of Level 3 are assumed to occur at the end of the period. For an asset or a liability that transfers into Level 3 during the period, the entire change in fair value for the period is excluded from the Gains (losses) included in earnings for positions still held column of the above reconciliation, whereas for transfers out of Level 3 during the period, the entire change in fair value for the period is included in the same column of the above reconciliation.

Transfers between Level 1 and 2 are dependent on whether fair value is obtained on the basis of quoted market prices in active markets (Level 1).

During the three months ended January 31, 2020, transfers out of Level 1 to Level 2 included Trading U.S. state, municipal and agencies debt and Obligations related to securities sold short of \$722 million and \$233 million, respectively.

During the three months ended January 31, 2020 there were no significant transfers out of Level 2 to Level 1.

Transfers between Level 2 and Level 3 are primarily due to either a change in the market observability for an input, or a change in an unobservable input's significance to a financial instrument's fair value.

During the three months ended January 31, 2020 there were no significant transfers in or out of Level 2 and Level 3.

Net interest income from financial instruments

Interest and dividend income arising from financial assets and financial liabilities and the associated costs of funding are reported in Net interest income.

(Millions of Canadian dollars)	For the three months ended	
	January 31 2020	January 31 2019 (1)
Interest and dividend income (2), (3)		
Financial instruments measured at fair value through profit or loss (4)	\$ 2,985	\$ 2,887
Financial instruments measured at fair value through other comprehensive income	309	272
Financial instruments measured at amortized cost	6,944	6,990
	10,238	10,149
Interest expense (2)		
Financial instruments measured at fair value through profit or loss	\$ 2,360	\$ 2,555
Financial instruments measured at amortized cost (5)	2,657	2,747
	5,017	5,302
Net interest income	\$ 5,221	\$ 4,847

(1) Amounts have been revised from those previously presented.

(2) Excludes the following amounts related to our insurance operations and included in Insurance premiums, investment and fee income in the Condensed Consolidated Statements of Income: Interest income of \$132 million (January 31, 2019 – \$129 million), and Interest expense of \$2 million (January 31, 2019 – \$1 million).

(3) Includes dividend income for the three months ended January 31, 2020 of \$608 million (January 31, 2019 – \$437 million), which is presented in Interest and dividend income in the Condensed Consolidated Statements of Income.

(4) Commencing Q4 2019, the interest component of the valuation of certain deposits carried at fair value through profit or loss (FVTPL) previously presented in trading revenue is presented in net interest income. Comparative amounts have been reclassified to conform with this presentation.

(5) Includes interest expense on lease liabilities for the three months ended January 31, 2020 of \$31 million, due to the adoption of IFRS 16.

Note 4 Securities

Unrealized gains and losses on securities at FVOCI (1), (2)

(Millions of Canadian dollars)	As at							
	January 31, 2020				October 31, 2019			
	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Debt issued or guaranteed by:								
Canadian government								
Federal (3)	\$ 972	\$ 4	\$ –	\$ 976	\$ 655	\$ 3	\$ (1)	\$ 657
Provincial and municipal	3,410	104	–	3,514	2,878	43	(23)	2,898
U.S. state, municipal and agencies (3)	34,941	302	(159)	35,084	20,787	215	(126)	20,876
Other OECD government	4,147	3	(2)	4,148	4,254	2	(5)	4,251
Mortgage-backed securities (3)	2,900	1	(8)	2,893	2,709	1	(8)	2,702
Asset-backed securities								
CDO	6,897	2	(6)	6,893	7,334	1	(35)	7,300
Non-CDO securities	828	3	(3)	828	847	4	(2)	849
Corporate debt and other debt	22,550	62	(5)	22,607	17,655	45	(10)	17,690
Equities	306	218	(3)	521	248	218	(3)	463
	\$ 76,951	\$ 699	\$ (186)	\$77,464	\$ 57,367	\$ 532	\$ (213)	\$ 57,686

(1) Excludes \$44,188 million of held-to-collect securities as at January 31, 2020 that are carried at amortized cost, net of allowance for credit losses (October 31, 2019 – \$44,784 million).

(2) Gross unrealized gains and losses includes \$(3) million of allowance for credit losses on debt securities at FVOCI as at January 31, 2020 (October 31, 2019 – \$(3) million) recognized in income and Other components of equity.

(3) The majority of the MBS are residential. Cost/Amortized cost, Gross unrealized gains, Gross unrealized losses and Fair value related to commercial MBS are \$2,105 million, \$1 million, \$7 million and \$2,099 million, respectively as at January 31, 2020 (October 31, 2019 – \$2,051 million, \$1 million, \$6 million and \$2,046 million, respectively).

Allowance for credit losses on investment securities

The following tables reconcile the opening and closing allowance for debt securities at FVOCI and amortized cost by stage.

Reconciling items include the following:

- Transfers between stages, which are presumed to occur before any corresponding remeasurement of the allowance.
- Purchases, which reflect the allowance related to assets newly recognized during the period, including those assets that were derecognized following a modification of terms.
- Sales and maturities, which reflect the allowance related to assets derecognized during the period without a credit loss being incurred, including those assets that were derecognized following a modification of terms.
- Changes in risk, parameters and exposures, which comprise the impact of changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions; partial repayments; changes in the measurement following a transfer between stages; and unwinding of the time value discount due to the passage of time.

Note 4 Securities (continued)**Allowance for credit losses – securities at FVOCI ⁽¹⁾**

(Millions of Canadian dollars)	For the three months ended							
	January 31, 2020				January 31, 2019			
	Performing Stage 1	Stage 2	Impaired Stage 3 (2)	Total	Performing Stage 1	Stage 2	Impaired Stage 3 (2)	Total
Balance at beginning of period	\$ 4	\$ –	\$ (7)	\$ (3)	\$ 4	\$ 7	\$ –	\$ 11
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	2	–	–	2	2	–	–	2
Sales and maturities	–	–	–	–	(1)	(7)	–	(8)
Changes in risk, parameters and exposures	–	–	(2)	(2)	1	–	3	4
Exchange rate and other	–	–	–	–	–	–	–	–
Balance at end of period	\$ 6	\$ –	\$ (9)	\$ (3)	\$ 6	\$ –	\$ 3	\$ 9

(1) Expected credit losses on debt securities at FVOCI are not separately recognized on the balance sheet as the related securities are recorded at fair value. The cumulative amount of credit losses recognized in income is presented in Other components of equity.

(2) Reflects changes in the allowance for purchased credit impaired securities.

Allowance for credit losses – securities at amortized cost

(Millions of Canadian dollars)	For the three months ended							
	January 31, 2020				January 31, 2019			
	Performing Stage 1	Stage 2	Impaired Stage 3	Total	Performing Stage 1	Stage 2	Impaired Stage 3	Total
Balance at beginning of period	\$ 5	\$ 19	\$ –	\$ 24	\$ 6	\$ 32	\$ –	\$ 38
Provision for credit losses								
Transfers to stage 1	–	–	–	–	–	–	–	–
Transfers to stage 2	–	–	–	–	–	–	–	–
Transfers to stage 3	–	–	–	–	–	–	–	–
Purchases	2	–	–	2	1	–	–	1
Sales and maturities	–	–	–	–	–	–	–	–
Changes in risk, parameters and exposures	(2)	(1)	–	(3)	(1)	(2)	–	(3)
Exchange rate and other	–	(1)	–	(1)	–	–	–	–
Balance at end of period	\$ 5	\$ 17	\$ –	\$ 22	\$ 6	\$ 30	\$ –	\$ 36

Credit risk exposure by internal risk rating

The following table presents the fair value of debt securities at FVOCI and gross carrying amount of securities at amortized cost. Risk ratings are based on internal ratings used in the measurement of expected credit losses, as at the reporting date, as outlined in the internal ratings maps in the Credit risk section of our 2019 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2020				October 31, 2019			
	Performing Stage 1	Stage 2	Impaired Stage 3 (1)	Total	Performing Stage 1	Stage 2	Impaired Stage 3 (1)	Total
Investment securities								
Securities at FVOCI								
Investment grade	\$ 76,356	\$ 1	\$ –	\$ 76,357	\$ 56,671	\$ 1	\$ –	\$ 56,672
Non-investment grade	429	1	–	430	400	1	–	401
Impaired	–	–	155	155	–	–	150	150
Items not subject to impairment (2)	\$ 76,785	\$ 2	\$ 155	\$ 76,942	\$ 57,071	\$ 2	\$ 150	\$ 57,223
				522				463
				\$ 77,464				\$ 57,686
Securities at amortized cost								
Investment grade	\$ 43,063	\$ 53	\$ –	\$ 43,116	\$ 43,681	\$ 46	\$ –	\$ 43,727
Non-investment grade	704	390	–	1,094	695	386	–	1,081
Impaired	–	–	–	–	–	–	–	–
Allowance for credit losses	\$ 43,767	\$ 443	\$ –	\$ 44,210	\$ 44,376	\$ 432	\$ –	\$ 44,808
	5	17	–	22	5	19	–	24
Amortized cost	\$ 43,762	\$ 426	\$ –	\$ 44,188	\$ 44,371	\$ 413	\$ –	\$ 44,784

(1) Includes \$155 million of purchased credit impaired securities (October 31, 2019 – \$150 million).

(2) Investment securities at FVOCI not subject to impairment represent equity securities designated as FVOCI.

Note 5 Loans and allowance for credit losses

Allowance for credit losses

(Millions of Canadian dollars)	For the three months ended									
	January 31, 2020					January 31, 2019				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other	Balance at end of period
Retail										
Residential mortgages	\$ 402	\$ (7)	\$ (8)	\$ (20)	\$ 367	\$ 382	\$ 33	\$ (4)	\$ (2)	\$ 409
Personal	935	121	(111)	(5)	940	895	123	(113)	(13)	892
Credit cards	832	177	(139)	(2)	868	760	140	(120)	–	780
Small business	61	14	(8)	(1)	66	51	6	(5)	(1)	51
Wholesale	1,165	102	(41)	(35)	1,191	979	204	(61)	(12)	1,110
Customers' liability under acceptances	24	14	–	1	39	21	10	–	–	31
	\$ 3,419	\$ 421	\$ (307)	\$ (62)	\$ 3,471	\$ 3,088	\$ 516	\$ (303)	\$ (28)	\$ 3,273
Presented as:										
Allowance for loan losses	\$ 3,100				\$ 3,139	\$ 2,912				\$ 3,061
Other liabilities – Provisions	295				292	154				180
Customers' liability under acceptances	24				39	21				31
Other components of equity	–				1	1				1

The following table reconciles the opening and closing allowance for loans and commitments, by stage, for each major product category.

Reconciling items include the following:

- Transfers between stages, which are presumed to occur before any corresponding remeasurements of the allowance.
- Originations, which reflect the allowance related to assets newly recognized during the period, including those assets that were derecognized following a modification of terms.
- Maturities, which reflect the allowance related to assets derecognized during the period without a credit loss being incurred, including those assets that were derecognized following a modification of terms.
- Changes in risk, parameters and exposures, which comprise the impact of changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions; partial repayments and additional draws on existing facilities; changes in the measurement following a transfer between stages; and unwinding of the time value discount due to the passage of time in stage 1 and stage 2.

Note 5 Loans and allowance for credit losses (continued)**Allowance for credit losses – Retail and wholesale loans**

(Millions of Canadian dollars)	For the three months ended							
	January 31, 2020				January 31, 2019			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Residential mortgages								
Balance at beginning of period	\$ 146	\$ 77	\$ 179	\$ 402	\$ 142	\$ 64	\$ 176	\$ 382
Provision for credit losses								
Transfers to stage 1	27	(18)	(9)	–	8	(8)	–	–
Transfers to stage 2	(4)	6	(2)	–	(3)	4	(1)	–
Transfers to stage 3	(1)	(8)	9	–	(1)	(8)	9	–
Originations	16	–	–	16	13	–	–	13
Maturities	(4)	(3)	–	(7)	(3)	(2)	–	(5)
Changes in risk, parameters and exposures	(45)	29	–	(16)	(18)	30	13	25
Write-offs	–	–	(12)	(12)	–	–	(5)	(5)
Recoveries	–	–	4	4	–	–	1	1
Exchange rate and other	(3)	(3)	(14)	(20)	–	(1)	(1)	(2)
Balance at end of period	\$ 132	\$ 80	\$ 155	\$ 367	\$ 138	\$ 79	\$ 192	\$ 409
Personal								
Balance at beginning of period	\$ 272	\$ 520	\$ 143	\$ 935	\$ 242	\$ 512	\$ 141	\$ 895
Provision for credit losses								
Transfers to stage 1	119	(119)	–	–	132	(132)	–	–
Transfers to stage 2	(19)	19	–	–	(23)	23	–	–
Transfers to stage 3	(1)	(20)	21	–	–	(44)	44	–
Originations	25	–	–	25	23	–	–	23
Maturities	(12)	(23)	–	(35)	(7)	(30)	–	(37)
Changes in risk, parameters and exposures	(111)	141	101	131	(132)	190	79	137
Write-offs	–	–	(149)	(149)	–	–	(144)	(144)
Recoveries	–	–	38	38	–	–	31	31
Exchange rate and other	–	(1)	(4)	(5)	–	–	(13)	(13)
Balance at end of period	\$ 273	\$ 517	\$ 150	\$ 940	\$ 235	\$ 519	\$ 138	\$ 892
Credit cards								
Balance at beginning of period	\$ 173	\$ 659	\$ –	\$ 832	\$ 161	\$ 599	\$ –	\$ 760
Provision for credit losses								
Transfers to stage 1	118	(118)	–	–	110	(110)	–	–
Transfers to stage 2	(22)	22	–	–	(19)	19	–	–
Transfers to stage 3	–	(88)	88	–	–	(80)	80	–
Originations	2	–	–	2	1	–	–	1
Maturities	(1)	(8)	–	(9)	(1)	(6)	–	(7)
Changes in risk, parameters and exposures	(94)	227	51	184	(84)	190	40	146
Write-offs	–	–	(174)	(174)	–	–	(153)	(153)
Recoveries	–	–	35	35	–	–	33	33
Exchange rate and other	(2)	–	–	(2)	–	–	–	–
Balance at end of period	\$ 174	\$ 694	\$ –	\$ 868	\$ 168	\$ 612	\$ –	\$ 780
Small business								
Balance at beginning of period	\$ 29	\$ 10	\$ 22	\$ 61	\$ 17	\$ 16	\$ 18	\$ 51
Provision for credit losses								
Transfers to stage 1	1	(1)	–	–	5	(5)	–	–
Transfers to stage 2	(1)	1	–	–	(1)	1	–	–
Transfers to stage 3	–	(1)	1	–	–	(3)	3	–
Originations	3	–	–	3	3	–	–	3
Maturities	(1)	(1)	–	(2)	(1)	(2)	–	(3)
Changes in risk, parameters and exposures	(2)	4	11	13	(7)	11	2	6
Write-offs	–	–	(10)	(10)	–	–	(7)	(7)
Recoveries	–	–	2	2	–	–	2	2
Exchange rate and other	–	(1)	–	(1)	–	–	(1)	(1)
Balance at end of period	\$ 29	\$ 11	\$ 26	\$ 66	\$ 16	\$ 18	\$ 17	\$ 51
Wholesale								
Balance at beginning of period	\$ 281	\$ 396	\$ 488	\$ 1,165	\$ 274	\$ 340	\$ 365	\$ 979
Provision for credit losses								
Transfers to stage 1	27	(26)	(1)	–	24	(24)	–	–
Transfers to stage 2	(8)	9	(1)	–	(9)	11	(2)	–
Transfers to stage 3	(1)	(18)	19	–	(1)	(16)	17	–
Originations	66	–	–	66	68	10	–	78
Maturities	(43)	(53)	–	(96)	(43)	(43)	–	(86)
Changes in risk, parameters and exposures	(17)	99	50	132	(11)	84	139	212
Write-offs	–	–	(54)	(54)	–	–	(68)	(68)
Recoveries	–	–	13	13	–	–	7	7
Exchange rate and other	(5)	–	(30)	(35)	(1)	(1)	(10)	(12)
Balance at end of period	\$ 300	\$ 407	\$ 484	\$ 1,191	\$ 301	\$ 361	\$ 448	\$ 1,110

Credit risk exposure by internal risk rating

The following table presents the gross carrying amount of loans measured at amortized cost, and the full contractual amount of undrawn loan commitments subject to the impairment requirements of IFRS 9. Risk ratings are based on internal ratings used in the measurement of expected credit losses as at the reporting date, as outlined in the internal ratings maps for Wholesale and Retail facilities in the Credit risk section of our 2019 Annual Report.

(Millions of Canadian dollars)	As at							
	January 31, 2020				October 31, 2019			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Retail								
Loans outstanding – Residential mortgages								
Low risk	\$ 244,103	\$ 6,411	\$ –	\$ 250,514	\$ 238,377	\$ 6,764	\$ –	\$ 245,141
Medium risk	13,903	1,251	–	15,154	14,033	1,347	–	15,380
High risk	3,023	2,675	–	5,698	2,843	2,722	–	5,565
Not rated (1)	40,873	731	–	41,604	40,030	726	–	40,756
Impaired	–	–	700	700	–	–	732	732
	301,902	11,068	700	313,670	295,283	11,559	732	307,574
Items not subject to impairment (2)				534				517
Total				314,204				308,091
Loans outstanding – Personal								
Low risk	\$ 71,001	\$ 1,756	\$ –	\$ 72,757	\$ 71,619	\$ 1,944	\$ –	\$ 73,563
Medium risk	5,213	2,863	–	8,076	5,254	3,011	–	8,265
High risk	876	1,814	–	2,690	843	1,874	–	2,717
Not rated (1)	7,187	93	–	7,280	7,293	105	–	7,398
Impaired	–	–	320	320	–	–	307	307
Total	84,277	6,526	320	91,123	85,009	6,934	307	92,250
Loans outstanding – Credit cards								
Low risk	\$ 13,668	\$ 103	\$ –	\$ 13,771	\$ 13,840	\$ 103	\$ –	\$ 13,943
Medium risk	2,126	1,778	–	3,904	2,250	1,827	–	4,077
High risk	125	1,428	–	1,553	137	1,432	–	1,569
Not rated (1)	694	50	–	744	677	45	–	722
Total	16,613	3,359	–	19,972	16,904	3,407	–	20,311
Loans outstanding – Small business								
Low risk	\$ 2,257	\$ 115	\$ –	\$ 2,372	\$ 2,200	\$ 107	\$ –	\$ 2,307
Medium risk	2,136	611	–	2,747	2,163	563	–	2,726
High risk	131	223	–	354	138	196	–	334
Not rated (1)	7	–	–	7	10	–	–	10
Impaired	–	–	62	62	–	–	57	57
Total	4,531	949	62	5,542	4,511	866	57	5,434
Undrawn loan commitments – Retail								
Low risk	\$ 203,094	\$ 1,936	\$ –	\$ 205,030	\$ 196,743	\$ 1,894	\$ –	\$ 198,637
Medium risk	8,806	245	–	9,051	8,251	246	–	8,497
High risk	925	193	–	1,118	851	208	–	1,059
Not rated (1)	5,650	126	–	5,776	5,861	146	–	6,007
Total	218,475	2,500	–	220,975	211,706	2,494	–	214,200
Wholesale – Loans outstanding								
Investment grade	\$ 49,268	\$ 67	\$ –	\$ 49,335	\$ 47,133	\$ 97	\$ –	\$ 47,230
Non-investment grade	122,070	12,163	–	134,233	119,778	11,940	–	131,718
Not rated (1)	5,801	318	–	6,119	5,862	320	–	6,182
Impaired	–	–	1,802	1,802	–	–	1,829	1,829
	177,139	12,548	1,802	191,489	172,773	12,357	1,829	186,959
Items not subject to impairment (2)				10,749				8,911
Total				202,238				195,870
Undrawn loan commitments – Wholesale								
Investment grade	\$ 223,333	\$ 2	\$ –	\$ 223,335	\$ 222,819	\$ 18	\$ –	\$ 222,837
Non-investment grade	98,452	9,300	–	107,752	96,191	9,007	–	105,198
Not rated (1)	3,269	1	–	3,270	3,986	–	–	3,986
Total	325,054	9,303	–	334,357	322,996	9,025	–	332,021

(1) In certain cases where an internal risk rating is not assigned, we use other approved credit risk assessment or rating methodologies, policies and tools to manage our credit risk.

(2) Items not subject to impairment are loans held at FVTPL.

Note 5 Loans and allowance for credit losses (continued)**Loans past due but not impaired ⁽¹⁾**

(Millions of Canadian dollars)	As at							
	January 31, 2020				October 31, 2019			
	1 to 29 days	30 to 89 days	90 days and greater	Total	1 to 29 days	30 to 89 days	90 days and greater	Total
Retail	\$ 3,749	\$ 1,423	\$ 202	\$ 5,374	\$ 3,173	\$ 1,369	\$ 186	\$ 4,728
Wholesale	2,521	516	5	3,042	1,543	460	3	2,006
	\$ 6,270	\$ 1,939	\$ 207	\$ 8,416	\$ 4,716	\$ 1,829	\$ 189	\$ 6,734

(1) Amounts presented may include loans past due as a result of administrative processes, such as mortgage loans on which payments are restrained pending payout due to sale or refinancing. Past due loans arising from administrative processes are not representative of the borrowers' ability to meet their payment obligations.

Note 6 Deposits

(Millions of Canadian dollars)	As at							
	January 31, 2020				October 31, 2019			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 149,105	\$ 51,253	\$ 101,644	\$ 302,002	\$ 143,958	\$ 49,806	\$ 100,968	\$ 294,732
Business and government	253,815	11,855	303,566	569,236	253,113	13,867	298,502	565,482
Bank	10,277	870	19,899	31,046	8,363	920	16,508	25,791
	\$ 413,197	\$ 63,978	\$ 425,109	\$ 902,284	\$ 405,434	\$ 64,593	\$ 415,978	\$ 886,005
Non-interest-bearing ⁽⁴⁾								
Canada	\$ 94,688	\$ 5,884	\$ 248	\$ 100,820	\$ 93,163	\$ 5,692	\$ 137	\$ 98,992
United States	32,782	—	—	32,782	34,632	—	—	34,632
Europe ⁽⁵⁾	871	—	—	871	760	—	—	760
Other International	5,620	5	—	5,625	5,225	5	—	5,230
Interest-bearing ⁽⁴⁾								
Canada	235,619	15,861	336,966	588,446	228,386	15,306	333,118	576,810
United States	5,610	38,336	46,350	90,296	4,704	39,626	41,776	86,106
Europe ⁽⁵⁾	32,998	880	30,668	64,546	33,073	825	30,090	63,988
Other International	5,009	3,012	10,877	18,898	5,491	3,139	10,857	19,487
	\$ 413,197	\$ 63,978	\$ 425,109	\$ 902,284	\$ 405,434	\$ 64,593	\$ 415,978	\$ 886,005

(1) Demand deposits are deposits for which we do not have the right to require notice of withdrawal, which includes both savings and chequing accounts.

(2) Notice deposits are deposits for which we can legally require notice of withdrawal. These deposits are primarily savings accounts.

(3) Term deposits are deposits payable on a fixed date, and include term deposits, guaranteed investment certificates and similar instruments.

(4) The geographical splits of the deposits are based on the point of origin of the deposits and where the revenue is recognized. As at January 31, 2020, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$325 billion, \$27 billion, \$47 billion and \$31 billion, respectively (October 31, 2019 – \$321 billion, \$23 billion, \$45 billion and \$31 billion, respectively).

(5) Europe includes the United Kingdom, Luxembourg, the Channel Islands, France and Italy.

Contractual maturities of term deposits

(Millions of Canadian dollars)	As at	
	January 31 2020	October 31 2019
Within 1 year:		
less than 3 months	\$ 116,904	\$ 94,585
3 to 6 months	49,773	62,814
6 to 12 months	91,855	92,507
1 to 2 years	42,322	50,055
2 to 3 years	36,091	31,852
3 to 4 years	32,132	31,373
4 to 5 years	22,043	21,130
Over 5 years	33,989	31,662
	\$ 425,109	\$ 415,978
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	\$ 388,000	\$ 379,000

Note 7 Employee benefits – Pension and other post-employment benefits

We offer a number of defined benefit and defined contribution plans which provide pension and post-employment benefits to eligible employees. The following tables present the composition of our pension and other post-employment benefit expense and the effects of remeasurements recorded in other comprehensive income.

Pension and other post-employment benefit expense

(Millions of Canadian dollars)	For the three months ended			
	Pension plans		Other post-employment benefit plans	
	January 31 2020	January 31 2019	January 31 2020	January 31 2019
Current service costs	\$ 92	\$ 74	\$ 11	\$ 10
Net interest expense (income)	5	(5)	15	16
Remeasurements of other long term benefits	–	–	4	2
Administrative expense	4	4	–	–
Defined benefit pension expense	\$ 101	\$ 73	\$ 30	\$ 28
Defined contribution pension expense	63	61	–	–
	\$ 164	\$ 134	\$ 30	\$ 28

Pension and other post-employment benefit remeasurements ⁽¹⁾

(Millions of Canadian dollars)	For the three months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	January 31 2020	January 31 2019	January 31 2020	January 31 2019
Actuarial (gains) losses:				
Changes in financial assumptions ⁽²⁾	\$ 1,047	\$ 607	\$ 96	\$ 57
Experience adjustments	–	–	–	(1)
Return on plan assets (excluding interest based on discount rate)	(507)	(144)	–	–
	\$ 540	\$ 463	\$ 96	\$ 56

(1) Market based assumptions, including Changes in financial assumptions and Return on plan assets, are reviewed on a quarterly basis. All other assumptions are updated during our annual review of plan assumptions.

(2) Changes in financial assumptions in our defined benefit pension plans primarily relate to changes in discount rates.

Note 8 Significant capital and funding transactions

Preferred Shares

On December 17, 2019, we purchased for cash 200,000 depositary shares, each representing a one-fortieth interest in a share of our Fixed Rate/Floating Rate Non-Cumulative First Preferred Shares, Series C-2 (C-2 Preferred Shares), for aggregate total consideration, including accrued dividends, of US\$6 million. The purchased depositary and underlying C-2 Preferred Shares were subsequently cancelled. The C-2 Preferred Shares do not qualify as Tier 1 regulatory capital.

Subordinated debentures

On December 6, 2019, we redeemed all \$2,000 million of our outstanding 2.99% subordinated debentures due on December 6, 2024 for 100% of their principal amount plus interest accrued to, but excluding, the redemption date.

On December 23, 2019, we issued \$1,500 million of NVCC subordinated debentures. The notes bear interest at a fixed rate of 2.88% per annum until December 23, 2024, and at the three-month Canadian Dollar Offered Rate plus 0.89% thereafter until their maturity on December 23, 2029.

Common shares issued ⁽¹⁾

(Millions of Canadian dollars, except number of shares)	For the three months ended			
	January 31, 2020		January 31, 2019	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans ⁽²⁾	233	\$ 18	159	\$ 11
Purchased for cancellation ⁽³⁾	(6,993)	(86)	(3,684)	(45)
	(6,760)	(68)	(3,525)	(34)

(1) The requirements of our dividend reinvestment plan (DRIP) are satisfied through either open market share purchases or shares issued from treasury. During the three months ended January 31, 2020 and January 31, 2019, our DRIP's requirements were satisfied through open market share purchases.

(2) Amounts include cash received for stock options exercised during the period and the fair value adjustment to stock options.

(3) During the three months ended January 31, 2020, we purchased for cancellation common shares at a total fair value of \$727 million (average cost of \$104.02 per share), with a book value of \$86 million (book value of \$12.34 per share). During the three months ended January 31, 2019, we purchased for cancellation common shares at a total fair value of \$348 million (average cost of \$94.40 per share), with a book value of \$45 million (book value of \$12.25 per share).

Note 9 Earnings per share

	For the three months ended	
	January 31 2020	January 31 2019
(Millions of Canadian dollars, except share and per share amounts)		
Basic earnings per share		
Net income	\$ 3,509	\$ 3,172
Preferred share dividends	(65)	(74)
Net income attributable to non-controlling interests	(5)	(2)
Net income available to common shareholders	3,439	3,096
Weighted average number of common shares (in thousands)	1,427,599	1,437,074
Basic earnings per share (in dollars)	\$ 2.41	\$ 2.15
Diluted earnings per share		
Net income available to common shareholders	\$ 3,439	\$ 3,096
Dilutive impact of exchangeable shares	4	4
Net income available to common shareholders including dilutive impact of exchangeable shares	3,443	3,100
Weighted average number of common shares (in thousands)	1,427,599	1,437,074
Stock options (1)	1,698	2,033
Issuable under other share-based compensation plans	750	737
Exchangeable shares (2)	3,013	3,351
Average number of diluted common shares (in thousands)	1,433,060	1,443,195
Diluted earnings per share (in dollars)	\$ 2.40	\$ 2.15

(1) The dilutive effect of stock options was calculated using the treasury stock method. When the exercise price of options outstanding is greater than the average market price of our common shares, the options are excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2020, no outstanding options were excluded from the calculation of diluted earnings per share. For the three months ended January 31, 2019, 1,364,706 outstanding options with an average price of \$99.73 were excluded from the calculation of diluted earnings per share.

(2) Includes exchangeable preferred shares.

Note 10 Legal and regulatory matters

We are a large global institution that is subject to many different complex legal and regulatory requirements that continue to evolve. We are and have been subject to a variety of legal proceedings, including civil claims and lawsuits, regulatory examinations, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions. Some of these matters may involve novel legal theories and interpretations and may be advanced under criminal as well as civil statutes, and some proceedings could result in the imposition of civil, regulatory enforcement or criminal penalties. We review the status of all proceedings on an ongoing basis and will exercise judgment in resolving them in such manner as we believe to be in our best interest. This is an area of significant judgment and uncertainty and the extent of our financial and other exposure to these proceedings after taking into account current accruals could be material to our results of operations in any particular period.

Our significant legal proceeding and regulatory matters are described in Note 26 of our 2019 Annual Consolidated Financial Statements.

Note 11 Results by business segment

(Millions of Canadian dollars)	For the three months ended January 31, 2020						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 3,226	\$ 738	\$ –	\$ 58	\$ 1,161	\$ 38	\$ 5,221
Non-interest income	1,384	2,428	1,994	539	1,387	(117)	7,615
Total revenue	4,610	3,166	1,994	597	2,548	(79)	12,836
Provision for credit losses	342	(2)	–	–	79	–	419
Insurance policyholder benefits, claims and acquisition expense	–	–	1,614	–	–	–	1,614
Non-interest expense	1,984	2,370	153	402	1,435	34	6,378
Net income (loss) before income taxes	2,284	798	227	195	1,034	(113)	4,425
Income taxes (recoveries)	598	175	46	52	152	(107)	916
Net income	\$ 1,686	\$ 623	\$ 181	\$ 143	\$ 882	\$ (6)	\$ 3,509
Non-interest expense includes:							
Depreciation and amortization	\$ 234	\$ 210	\$ 15	\$ 50	\$ 127	\$ –	\$ 636

(Millions of Canadian dollars)	For the three months ended January 31, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2), (3)	\$ 3,134	\$ 744	\$ –	\$ (31)	\$ 969	\$ 31	\$ 4,847
Non-interest income (3)	1,284	2,204	1,579	662	1,129	(116)	6,742
Total revenue	4,418	2,948	1,579	631	2,098	(85)	11,589
Provision for credit losses	348	26	–	–	140	–	514
Insurance policyholder benefits, claims and acquisition expense	–	–	1,225	–	–	–	1,225
Non-interest expense	1,915	2,164	154	418	1,230	31	5,912
Net income (loss) before income taxes	2,155	758	200	213	728	(116)	3,938
Income taxes (recoveries)	584	161	34	52	75	(140)	766
Net income	\$ 1,571	\$ 597	\$ 166	\$ 161	\$ 653	\$ 24	\$ 3,172
Non-interest expense includes:							
Depreciation and amortization	\$ 153	\$ 147	\$ 11	\$ 34	\$ 95	\$ –	\$ 440

(1) Taxable equivalent basis.

(2) Interest revenue is reported net of interest expense as we rely primarily on net interest income as a performance measure.

(3) Commencing Q4 2019, the interest component of the valuation of certain deposits carried at FVTPL previously presented in trading revenue is presented in net interest income. Comparative amounts have been reclassified to conform with this presentation.

Total assets and total liabilities by business segment

(Millions of Canadian dollars)	As at January 31, 2020						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 489,522	\$ 109,969	\$ 20,293	\$ 144,707	\$ 666,824	\$ 44,989	\$ 1,476,304
Total liabilities	\$ 489,545	\$ 109,963	\$ 20,270	\$ 144,664	\$ 666,785	\$ (38,984)	\$ 1,392,243

(Millions of Canadian dollars)	As at October 31, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 481,720	\$ 106,579	\$ 19,012	\$ 144,406	\$ 634,313	\$ 42,905	\$ 1,428,935
Total liabilities	\$ 481,745	\$ 106,770	\$ 19,038	\$ 144,378	\$ 634,126	\$ (40,747)	\$ 1,345,310

Note 12 Capital management

Regulatory capital and capital ratios

OSFI formally establishes risk-based capital and leverage targets for deposit-taking institutions in Canada. During the first quarter of 2020, we complied with all capital and leverage requirements, including the domestic stability buffer, imposed by OSFI.

	As at	
	January 31 2020	October 31 2019
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)		
Capital ⁽¹⁾		
CET1 capital	\$ 63,054	\$ 62,184
Tier 1 capital	68,709	67,861
Total capital	78,220	77,888
Risk-weighted Assets (RWA) used in calculation of capital ratios ⁽¹⁾		
Credit risk	\$ 428,067	\$ 417,835
Market risk	28,415	28,917
Operational risk	67,243	66,104
Total RWA	\$ 523,725	\$ 512,856
Capital ratios and Leverage ratio ⁽¹⁾		
CET1 ratio	12.0%	12.1%
Tier 1 capital ratio	13.1%	13.2%
Total capital ratio	14.9%	15.2%
Leverage ratio	4.2%	4.3%
Leverage ratio exposure (billions)	\$ 1,630	\$ 1,570

(1) Capital, RWA, and capital ratios are calculated using OSFI Capital Adequacy Requirements based on the Basel III framework. The leverage ratio is calculated using OSFI Leverage Requirements Guideline based on the Basel III framework.

Shareholder Information

Corporate headquarters

Street address:
Royal Bank of Canada
200 Bay Street
Toronto, Ontario M5J 2J5
Canada
Tel: 1-888-212-5533

Mailing address:
P.O. Box 1
Royal Bank Plaza
Toronto, Ontario M5J 2J5
Canada
website: rbc.com

Transfer Agent and Registrar

Main Agent:
Computershare Trust Company
of Canada
1500 Robert-Bourassa Blvd.
Suite 700
Montreal, Quebec H3A 3S8
Canada
Tel: 1-866-586-7635 (Canada and
the U.S.) or 514-982-7555
(International)
Fax: 514-982-7580
website: computershare.com/rbc

Co-Transfer Agent (U.S.):
Computershare Trust
Company, N.A.
250 Royall Street
Canton, Massachusetts 02021
U.S.A.

Co-Transfer Agent (U.K.):
Computershare Investor
Services PLC
Securities Services – Registrars
P.O. Box 82, The Pavilions,
Bridgewater Road,
Bristol BS99 6ZZ
U.K.

Stock exchange listings

(Symbol: RY)

Common shares are listed on:
Canada – Toronto Stock
Exchange (TSX)
U.S. – New York Stock Exchange
(NYSE)
Switzerland – Swiss Exchange
(SIX)

All preferred shares are listed on
the TSX with the exception of the
series C-2. The related depository
shares of the series C-2 preferred
shares are listed on the NYSE.

Valuation day price

For Canadian income tax
purposes, Royal Bank of Canada's
common stock was quoted at
\$29.52 per share on the Valuation
Day (December 22, 1971). This is
equivalent to \$7.38 per share after
adjusting for the two-for-one stock
split of March 1981 and the
two-for-one stock split of February
1990. The one-for-one stock
dividends in October 2000 and
April 2006 did not affect the
Valuation Day amount for our
common shares.

Shareholder contacts

For dividend information, change
in share registration or address,
lost stock certificates, tax forms,
estate transfers or dividend
reinvestment, please contact:
Computershare Trust Company of
Canada
100 University Avenue, 8th Floor
Toronto, Ontario M5J 2Y1
Canada

Tel: 1-866-586-7635 (Canada and
the U.S.) or 514-982-7555
(International)
Fax: 1-888-453-0330 (Canada and
the U.S.) or 416-263-9394
(International)
email: service@computershare.com

For other shareholder inquiries,
please contact:
Shareholder Relations
Royal Bank of Canada
200 Bay Street
South Tower
Toronto, Ontario M5J 2J5
Canada
Tel: 416-955-7806

Financial analysts, portfolio managers, institutional investors

For financial information inquiries,
please contact:
Investor Relations
Royal Bank of Canada
200 Bay Street
South Tower
Toronto, Ontario M5J 2J5
Canada
Tel: 416-955-7802

or visit our website at
rbc.com/investorrelations

Direct deposit service

Shareholders in Canada and the
U.S. may have their RY common
share dividends deposited
directly to their bank account by
electronic funds transfer. To
arrange for this service, please
contact our Transfer Agent and
Registrar, Computershare Trust
Company of Canada.

Eligible dividend designation

For purposes of the *Income Tax*
Act (Canada) and any
corresponding provincial and
territorial tax legislation, all
dividends (and deemed
dividends) paid by RBC to
Canadian residents on both its
common and preferred shares,
are designated as "eligible
dividends", unless stated
otherwise.

Common share repurchases

We are engaged in a Normal
Course Issuer Bid (NCIB) which
allows us to repurchase for
cancellation, up to 20 million
common shares during the
period spanning from March 1,
2019 to February 29, 2020, when
the bid expires, or such earlier
date as we may complete the
purchases pursuant to our
Notice of Intention filed with the
Toronto Stock Exchange.

Dividend dates for 2020

Subject to approval by the Board of Directors

	Record dates	Payment dates
Common and preferred shares series W, AA, AC, AE, AF, AG, AZ, BB, BD, BF, BH, BI, BJ, BK, BM and BO	January 27 April 23 July 27 October 26	February 24 May 22 August 24 November 24
Preferred shares series C-2 (US\$)	January 28 April 27 July 28 October 27	February 7 May 7 August 7 November 6

Governance

Summaries of the significant ways in which corporate governance
practices followed by RBC differ from corporate governance
practices required to be followed by U.S. domestic companies
under the NYSE listing standards are available on our website at
rbc.com/governance.

We determine the amount and
timing of the purchases under
the NCIB, subject to prior
consultation with the Office of
the Superintendent of
Financial Institutions Canada.

A copy of our Notice of
Intention to file a NCIB may be
obtained, without charge, by
contacting our Corporate
Secretary at our Toronto
mailing address.

2020 Quarterly earnings release dates

First quarter	February 21
Second quarter	May 27
Third quarter	August 26
Fourth quarter	December 2

2020 Annual Meeting

The Annual Meeting of
Common Shareholders will be
held on Wednesday, April 8,
2020, at 9:30 a.m. (Eastern
Time) at the Metro Toronto
Convention Centre, North
Building, John Bassett Theatre
255 Front Street West,
Toronto, Ontario, Canada

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