

# Second Quarter 2019



## Royal Bank of Canada second quarter 2019 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  
**\$3.2 Billion**

*Diversified earnings growth*

Diluted EPS<sup>(1)</sup>  
**\$2.20**

*Solid 7% growth  
YoY*

ROE<sup>(2)</sup>  
**17.5%**

*Balanced capital  
deployment*

CET1 Ratio  
**11.8%**

*Strong capital ratio*

**TORONTO, May 23, 2019** — Royal Bank of Canada (RY on TSX and NYSE) today reported net income of \$3,230 million for the quarter ended April 30, 2019, up \$170 million or 6% from the prior year, with solid diluted EPS<sup>(1)</sup> growth of 7%. Results reflected strong earnings growth in Capital Markets, Personal & Commercial Banking and Wealth Management. These were partially offset by lower earnings in Investor & Treasury Services and Insurance. Results this quarter also reflected continued investments in talent, and digital and technology initiatives.

Compared to last quarter, net income was up \$58 million with higher earnings in Capital Markets, partially offset by lower earnings in Personal & Commercial Banking, Wealth Management, Insurance, and Investor & Treasury Services. Personal & Commercial Banking and Wealth Management results were impacted by three less days in the quarter.

Provisions for credit losses (PCL) on impaired loans ratio of 29 basis points (bps) was up 1 bp compared to last quarter due to higher PCL on impaired loans on a couple of accounts in our Canadian Banking commercial portfolio. This was partially offset by lower PCL in Capital Markets, which included higher provisions in the previous quarter related to one account in the utilities sector. Our capital position remained strong, with a Common Equity Tier 1 (CET1) ratio of 11.8%, up 40 bps from last quarter mainly due to strong internal capital generation.

*“Our consistent earnings growth is a testament to the strength of our diversified business model and our strategy to transform the bank to create more value for clients. We continue to make strategic investments to drive long-term growth for shareholders, guided by our clear purpose of helping clients thrive and communities prosper.”*

– Dave McKay, RBC President and Chief Executive Officer

Q2 2019  
Compared to  
Q2 2018

- Net income of \$3,230 million ↑ 6%
- Diluted EPS<sup>(1)</sup> of \$2.20 ↑ 7%
- ROE<sup>(2)</sup> of 17.5% ↓ 60 bps
- CET1 ratio of 11.8% ↑ 90 bps

Q2 2019  
Compared to  
Q1 2019

- Net income of \$3,230 million ↑ 2%
- Diluted EPS<sup>(1)</sup> of \$2.20 ↑ 2%
- ROE<sup>(2)</sup> of 17.5% ↑ 80 bps
- CET1 ratio of 11.8% ↑ 40 bps

YTD 2019  
Compared to  
YTD 2018

- Net income of \$6,402 million ↑ 5%
- Diluted EPS<sup>(1)</sup> of \$4.34 ↑ 7%
- ROE<sup>(2)</sup> of 17.1% ↓ 60 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 Q2 2019 Report to Shareholders.

### Table of contents

<p><b>1</b> <a href="#">Second quarter highlights</a></p> <p><b>2</b> <a href="#">Management’s Discussion and Analysis</a></p> <p><b>2</b> <a href="#">Caution regarding forward-looking statements</a></p> <p><b>2</b> <a href="#">Overview and outlook</a></p> <p>2 About Royal Bank of Canada</p> <p>3 Selected financial and other highlights</p> <p>4 Economic, market and regulatory review and outlook</p> <p><b>5</b> <a href="#">Financial performance</a></p> <p>5 Overview</p> <p><b>10</b> <a href="#">Business segment results</a></p> <p>10 How we measure and report our business segments</p> <p>10 Key performance and non-GAAP measures</p> <p>12 Personal &amp; Commercial Banking</p>	<p>14 Wealth Management</p> <p>15 Insurance</p> <p>16 Investor &amp; Treasury Services</p> <p>17 Capital Markets</p> <p>18 Corporate Support</p> <p><b>19</b> <a href="#">Quarterly results and trend analysis</a></p> <p><b>20</b> <a href="#">Financial condition</a></p> <p>20 Condensed balance sheets</p> <p>21 Off-balance sheet arrangements</p> <p><b>22</b> <a href="#">Risk management</a></p> <p>22 Credit risk</p> <p>29 Market risk</p> <p>33 Liquidity and funding risk</p> <p><b>40</b> <a href="#">Capital management</a></p> <p><b>43</b> <a href="#">Capital, liquidity, and other regulatory developments</a></p>	<p><b>44</b> <a href="#">Accounting and control matters</a></p> <p>44 Summary of accounting policies and estimates</p> <p>44 Change in accounting policies and disclosures</p> <p>45 Controls and procedures</p> <p><b>45</b> <a href="#">Related party transactions</a></p> <p><b>46</b> <a href="#">Enhanced Disclosure Task Force recommendations index</a></p> <p><b>47</b> <a href="#">Interim Condensed Consolidated Financial Statements</a> (unaudited)</p> <p><b>53</b> <a href="#">Notes to the Interim Condensed Consolidated Financial Statements</a> (unaudited)</p> <p><b>75</b> <a href="#">Shareholder Information</a></p>
---	--	--

## 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 and six month periods ended or as at April 30, 2019, compared to the corresponding periods in the prior fiscal year and the three month period ended January 31, 2019. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended April 30, 2019 (Condensed Financial Statements) and related notes and our 2018 Annual Report. This MD&A is dated May 22, 2019. 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 2018 Annual Information Form, is available free of charge on our website at [rbc.com/investorrelations](http://rbc.com/investorrelations), on the Canadian Securities Administrators' website at [sedar.com](http://sedar.com) and on the EDGAR section of the United States (U.S.) Securities and Exchange Commission's (SEC) website at [sec.gov](http://sec.gov).

Information contained in or otherwise accessible through the websites mentioned 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 Q2 2019 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 2018 Annual Report and the Risk management section of this Q2 2019 Report to Shareholders; including global uncertainty, Canadian housing and household indebtedness, information technology and cyber risk, regulatory changes, digital disruption and innovation, data and third party related risks, 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 Q2 2019 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 2018 Annual Report, as updated by the Economic, market and regulatory review and outlook section of this Q2 2019 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 2018 Annual Report and the Risk management section of this Q2 2019 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 84,000+ 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 more than 16 million clients in Canada, the U.S. and 34 other countries. Learn more at [rbc.com](http://rbc.com).

## Selected financial and other highlights

(Millions of Canadian dollars, except per share, number of and percentage amounts)	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Total revenue	\$ 11,499	\$ 11,589	\$ 10,054	\$ 23,088	\$ 20,882
Provision for credit losses (PCL)	426	514	274	940	608
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	1,160	1,225	421	2,385	1,257
Non-interest expense	5,916	5,912	5,482	11,828	11,093
Income before income taxes	3,997	3,938	3,877	7,935	7,924
<b>Net income</b>	<b>\$ 3,230</b>	<b>\$ 3,172</b>	<b>\$ 3,060</b>	<b>\$ 6,402</b>	<b>\$ 6,072</b>
<b>Segments – net income</b>					
Personal & Commercial Banking	\$ 1,549	\$ 1,571	\$ 1,459	\$ 3,120	\$ 2,980
Wealth Management	585	597	537	1,182	1,134
Insurance	154	166	172	320	299
Investor & Treasury Services	151	161	212	312	431
Capital Markets	776	653	665	1,429	1,413
Corporate Support	15	24	15	39	(185)
<b>Net income</b>	<b>\$ 3,230</b>	<b>\$ 3,172</b>	<b>\$ 3,060</b>	<b>\$ 6,402</b>	<b>\$ 6,072</b>
<b>Selected information</b>					
Earnings per share (EPS) – basic	\$ 2.20	\$ 2.15	\$ 2.06	\$ 4.36	\$ 4.08
– diluted	2.20	2.15	2.06	4.34	4.07
Return on common equity (ROE) (1) (2)	17.5%	16.7%	18.1%	17.1%	17.7%
Average common equity (1)	\$ 74,000	\$ 73,550	\$ 67,450	\$ 73,800	\$ 67,150
Net interest margin (NIM) – on average earning assets (1)	1.64%	1.62%	1.68%	1.63%	1.66%
PCL on loans as a % of average net loans and acceptances	0.29%	0.34%	0.20%	0.32%	0.22%
PCL on impaired loans as a % of average net loans and acceptances	0.29%	0.28%	0.22%	0.28%	0.23%
Gross impaired loans (GIL) as a % of loans and acceptances	0.49%	0.46%	0.47%	0.49%	0.47%
Liquidity coverage ratio (LCR) (3)	127%	128%	122%	127%	122%
<b>Capital ratios and Leverage ratio</b>					
Common Equity Tier 1 (CET1) ratio	11.8%	11.4%	10.9%	11.8%	10.9%
Tier 1 capital ratio	12.9%	12.7%	12.3%	12.9%	12.3%
Total capital ratio	14.8%	14.5%	14.1%	14.8%	14.1%
Leverage ratio (4)	4.3%	4.3%	4.3%	4.3%	4.3%
<b>Selected balance sheet and other information (5)</b>					
Total assets	\$ 1,378,876	\$ 1,366,207	\$ 1,274,778	\$ 1,378,876	\$ 1,274,778
Securities, net of applicable allowance	240,991	235,832	220,841	240,991	220,841
Loans, net of allowance for loan losses	602,392	589,820	551,393	602,392	551,393
Derivative related assets	84,812	84,816	94,175	84,812	94,175
Deposits	864,101	852,564	822,048	864,101	822,048
Common equity	76,139	74,147	69,122	76,139	69,122
Total capital risk-weighted assets	510,463	508,512	489,172	510,463	489,172
Assets under management (AUM)	733,100	688,000	660,900	733,100	660,900
Assets under administration (AUA) (6)	5,655,600	5,363,900	5,666,400	5,655,600	5,666,400
<b>Common share information</b>					
Shares outstanding (000s) – average basic	1,435,091	1,437,074	1,443,084	1,436,099	1,447,504
– average diluted	1,441,163	1,443,195	1,449,737	1,442,194	1,454,299
– end of period (7)	1,434,879	1,435,073	1,440,986	1,434,879	1,440,986
Dividends declared per common share	\$ 1.02	\$ 0.98	\$ 0.94	\$ 2.00	\$ 1.85
Dividend yield (8)	3.9%	4.1%	3.7%	4.0%	3.6%
Common share price (RY on TSX) (9)	\$ 106.77	\$ 100.02	\$ 97.64	\$ 106.77	\$ 97.64
Market capitalization (TSX) (9)	153,202	143,536	140,798	153,202	140,798
<b>Business information (number of)</b>					
Employees (full-time equivalent) (FTE)	82,197	82,108	79,308	82,197	79,308
Bank branches	1,335	1,334	1,355	1,335	1,355
Automated teller machines (ATMs)	4,569	4,568	4,875	4,569	4,875
Period average US\$ equivalent of C\$1.00 (10)	\$ 0.751	\$ 0.749	\$ 0.778	\$ 0.750	\$ 0.786
Period-end US\$ equivalent of C\$1.00	\$ 0.746	\$ 0.761	\$ 0.779	\$ 0.746	\$ 0.779

(1) 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.

(2) 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.

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

(4) The Leverage ratio is a regulatory measure under the Basel III framework. For further details, refer to the Capital management section.

(5) Represents period-end spot balances.

(6) AUA includes \$16.2 billion and \$8.3 billion (January 31, 2019 – \$16.6 billion and \$8.5 billion; April 30, 2018 – \$17.8 billion and \$9.1 billion) of securitized residential mortgages and credit card loans, respectively.

(7) Effective Q4 2018, Common shares outstanding includes the impact of treasury shares. Comparative amounts have been adjusted to conform with this presentation.

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

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

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

## Economic, market and regulatory review and outlook – data as at May 22, 2019

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 0.7%<sup>1</sup> in the first calendar quarter of 2019, a relatively modest improvement on the previous calendar quarter's 0.4%<sup>1</sup> increase. Growth continues to be restrained by a slowdown in the oil and gas industry, though the sector is expected to be less of a drag going forward amid higher global oil prices and a reduction in Alberta's mandatory production curtailments. Growth outside the energy sector picked up in the first calendar quarter, with an improvement in consumer spending and stabilization in the housing sector, both of which were supported by the continuation of a strong labour market. The Bank of Canada (BoC) has left its overnight rate unchanged at 1.75% since October 2018 and April's policy statement remained silent on potential future rate hikes.

#### U.S.

Growth in the U.S. increased to 3.2%<sup>1</sup> in the first calendar quarter of 2019 from 2.2%<sup>1</sup> in the previous calendar quarter. That was despite slower growth in both consumer spending and business investment, as well as a decline in federal spending due to the partial government shutdown earlier this year. Activity in the first calendar quarter was driven by an increase in net trade and inventory investment, neither of which are seen as sustainable sources of growth. Overall growth is expected to moderate in the coming quarters, albeit with a healthier composition including stronger consumer spending and business investment. With unemployment remaining low but the economy showing few signs of inflationary pressure, the Federal Reserve (Fed) has left interest rates steady since December 2018.

#### Europe

The Euro area's growth picked up slightly to a rate of 0.4% in the first calendar quarter of 2019 from 0.2% in the previous calendar quarter. Indicators point to divergence between the manufacturing and services sectors, with the latter indicating fairly steady growth in domestic demand while a slowdown in the former reflects a generally weaker global backdrop. The European Central Bank has maintained its stimulative monetary policy stance amid low inflation. In the U.K., Brexit uncertainty continues to weigh on business investment, though the economy grew at a moderate 0.5% pace in the first calendar quarter of 2019. The Bank of England has held its policy rate steady at 0.75% since August 2018 amid ongoing Brexit uncertainty.

#### Financial markets

With inflation remaining low and central banks showing less inclination to raise interest rates, government bond yields have generally declined since the start of calendar 2019. Expectations of less monetary policy tightening, and in some cases more accommodative fiscal policy, helped drive a recovery in equity markets in the first calendar quarter of 2019. Recent improvement in some global growth indicators has also supported equities, and along with supply constraints, underpinned an increase in global oil prices in the first calendar quarter of 2019. The yield curve briefly inverted in March 2019 as long-term government bond yields declined. However, the move was not sustained and other economic indicators point to limited near-term risk of a recession.

### 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 or regulations and the expectations of those who enforce them. A high level summary of the key regulatory changes that have the potential to increase our costs, impact our profitability, and increase the complexity of our operations is included in the Legal and regulatory environment risk section of our 2018 Annual Report, as updated below.

#### Global Uncertainty

Trade policy remains a risk to the global economic outlook, including Brexit negotiations, and Canadian and U.S. trade tensions with China. The outcome of the Brexit negotiations and its resulting impact on global trade remains uncertain. In March, China imposed a ban on the imports of Canadian canola, and tensions remain elevated between China and the U.S. as they continue to negotiate a trade deal. In April, the International Monetary Fund further lowered its 2019 global growth projections, with the possibility for additional downgrades should these and other downside risks materialize. However, in May 2019, Canada and the U.S. reached an agreement which lifted import duties imposed on steel and aluminum.

#### Climate Change

Climate change regulations, frameworks, and guidance that apply to banks, insurers and asset managers are rapidly evolving. In March, the BoC joined the Network for Greening the Financial System (NGFS), a group of over 34 central banks and supervisors, who issued recommendations on managing environmental and climate-related risks in April 2019. More recently, the BoC has identified climate change as one of the six vulnerabilities in their 2019 Financial System Review. At this time, the BoC has not released its expectations related to these recommendations; however, as a federally-regulated financial institution, we will be obligated to comply with any resulting requirements and incur any related additional costs.



## Privacy

Legislative and regulatory developments are being closely monitored since the General Data Protection Regulation became law in the European Union (EU). The Office of the Privacy Commissioner of Canada (OPC) continues to call for more modern legislation, including the ability to audit businesses and fine companies that do not adhere to privacy laws. The OPC has also revisited its position on consent for certain cross-border transfers of personal information and has issued revised guidance for consultation. These actions demonstrate the ongoing trend toward increased regulatory intervention in the use and safeguarding of personal information. We are reviewing the revised guidance and the potential implications for our various businesses.

## United States Regulatory Initiatives

Policymakers continue to consider reforms to various U.S. financial regulations, certain of which may, if implemented, result in a reduction to the complexity of the U.S. regulatory framework and associated compliance costs. In April 2019, the Fed and the Federal Deposit Insurance Corporation released proposals related to resolution plans for bank holding companies, foreign banks and their intermediate holding companies, and insured depository institutions. Other initiatives may introduce new or more stringent requirements, including additional compliance requirements and disclosure obligations. For example, in April 2019 the Fed released proposals related to enhanced prudential standards, regulatory capital, and liquidity standards for foreign banks operating in the U.S., and the SEC has proposed Regulation Best Interest, which is a standard of conduct for brokers and advisors.

## U.K. and European Regulatory Reform

Political uncertainty in the U.K. has stalled negotiations with respect to the U.K.'s exit from the EU. In April 2019, all members of the EU agreed to extend the deadline for the U.K.'s departure from the EU, originally set for March 29, 2019, to October 31, 2019. Until the date of its exit or, if there is a transition period, until the period expires, the U.K. will continue to remain an EU Member State subject to all EU legislation. Other forthcoming regulatory initiatives include the EU's Central Securities Depository Regulation rules. The regulation is intended to increase discipline in the settlement of securities transactions and is scheduled to take effect in September 2020.

For a discussion on risk factors resulting from these 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 2018 Annual Report and the Capital, liquidity and other regulatory developments section of our Q1 2019 and of this Q2 2019 Report to Shareholders. For further details on our framework and activities to manage risks, refer to the risk and Capital management sections of our 2018 Annual Report and the Risk management and Capital management sections of this Q2 2019 Report to Shareholders.

## Financial performance

### Overview

#### Q2 2019 vs. Q2 2018

Net income of \$3,230 million was up \$170 million or 6% from a year ago. Diluted earnings per share (EPS) of \$2.20 was up \$0.14 or 7% and return on common equity (ROE) of 17.5% was down 60 bps from 18.1% last year. Our Common Equity Tier 1 (CET1) ratio of 11.8% was up 90 bps from a year ago.

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

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

Personal & Commercial Banking earnings increased mainly due to average volume growth of 7% and higher spreads in Canadian Banking, and higher service charges. These factors were partially offset by higher PCL, and an increase in technology related and marketing costs.

Wealth Management results were higher mainly attributable to higher net interest income and higher average fee-based client assets. These factors were partially offset by increased costs in support of business growth and higher PCL.

Investor & Treasury Services earnings decreased primarily due to lower funding and liquidity revenue and lower revenue from our asset services business.

Insurance results were down primarily reflecting lower favourable investment-related experience and increased disability and life retrocession claims costs, partially offset by favourable life retrocession contract renegotiations and favourable actuarial adjustments.

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

#### Q2 2019 vs. Q1 2019

Net income of \$3,230 million was up \$58 million or 2% from the prior quarter. Diluted EPS of \$2.20 was up \$0.05 or 2% and ROE of 17.5% was up 80 bps. Our CET1 ratio of 11.8% was up 40 bps.

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

Capital Markets earnings were up due to improved market conditions and higher client activity. The increase was primarily driven by higher debt origination in most regions, lower PCL, and higher fixed income trading and equity origination largely in North America. These factors were partially offset by lower equity trading primarily in the U.S., higher compensation on improved results and lower foreign exchange trading largely in Canada.

Personal & Commercial Banking results were down reflecting three less days in the quarter, higher PCL and an increase in marketing costs. These factors were partially offset by lower staff related costs and improved spreads in Canadian Banking. The prior quarter also included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados.

Wealth Management earnings decreased primarily reflecting a favourable accounting adjustment related to Canadian Wealth Management in the prior period, and lower net interest income as volume growth was more than offset by lower spreads and three less days in the quarter. These factors were partially offset by higher transaction volumes.

Insurance results were down mainly due to higher claims costs in International Insurance, partially offset by favourable actuarial adjustments related to the universal life portfolio.

Investor & Treasury Services results decreased primarily due to lower funding and liquidity revenue, including the favourable impact of money market opportunities in the prior quarter, partially offset by the impact of annual regulatory costs incurred in the prior period and lower technology costs.

### Q2 2019 vs. Q2 2018 (Six months ended)

Net income of \$6,402 million increased \$330 million or 5% from a year ago. Six month diluted EPS of \$4.34 was up \$0.27 or 7% and ROE of 17.1% was down 60 bps.

Our results reflected higher earnings in Personal & Commercial Banking, Wealth Management, Insurance, and Capital Markets, partially offset by lower results in Investor & Treasury Services. Our results also reflect an increase due to foreign exchange translation and the impact in the prior year of the U.S. Tax Reform which resulted in the write-down of net deferred tax assets.

Personal & Commercial Banking earnings increased due to average volume growth of 6% and higher spreads. These factors were partially offset by an increase in PCL, higher technology and staff related costs, and higher marketing costs.

Wealth Management results were up primarily reflecting an increase in net interest income, higher fee-based client assets, and the impact of foreign exchange translation. These factors were partially offset by increased costs in support of business growth, higher PCL, and higher variable compensation on improved results.

Insurance earnings were higher mainly due to favourable life retrocession contract renegotiations, partially offset by lower favourable investment-related experience.

Capital Markets results increased driven by a lower effective tax rate largely reflecting changes in earnings mix, higher revenue in Global Markets and the impact of foreign exchange translation. These factors were partially offset by higher PCL, lower revenue in Corporate and Investment Banking and increased technology and related costs.

Investor & Treasury Services results were down largely due to lower funding and liquidity revenue, lower revenue from our asset services business and higher costs in support of efficiency and technology initiatives.

Corporate Support net income was \$39 million, largely due to asset/liability management activities. Net loss was \$185 million in the prior year, largely due to the impact of the U.S. Tax Reform of \$178 million as noted above, partially offset by asset/liability management activities.

### Impact of foreign currency translation

(Millions of Canadian dollars, except per share amounts)	For the three months ended		For the six months ended
	Q2 2019 vs. Q2 2018	Q2 2019 vs. Q1 2019	Q2 2019 vs. Q2 2018
<i>Increase (decrease):</i>			
Total revenue	\$ 92	\$ (8)	\$ 278
PCL	1	–	9
Non-interest expense	59	(5)	174
Income taxes	3	(1)	10
Net income	29	(2)	85
Impact on EPS			
Basic	\$ 0.02	\$ –	\$ 0.06
Diluted	0.02	–	0.06

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

(Average foreign currency equivalent of C\$1.00) (1)	For the three months ended			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
U.S. dollar	0.751	0.749	0.778	0.750	0.786
British pound	0.573	0.582	0.562	0.578	0.570
Euro	0.667	0.656	0.638	0.661	0.647

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

**Total revenue**

(Millions of Canadian dollars)	For the three months ended			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Interest and dividend income	\$ 10,132	\$ 10,149	\$ 7,865	\$ 20,281	\$ 15,405
Interest expense	5,295	5,265	3,444	10,560	6,539
<b>Net interest income</b>	<b>\$ 4,837</b>	<b>\$ 4,884</b>	<b>\$ 4,421</b>	<b>\$ 9,721</b>	<b>\$ 8,866</b>
<b>NIM</b>	<b>1.64%</b>	<b>1.62%</b>	<b>1.68%</b>	<b>1.63%</b>	<b>1.66%</b>
Insurance premiums, investment and fee income	\$ 1,515	\$ 1,579	\$ 806	\$ 3,094	\$ 1,950
Trading revenue	250	358	236	608	554
Investment management and custodial fees	1,381	1,450	1,318	2,831	2,643
Mutual fund revenue	899	873	862	1,772	1,747
Securities brokerage commissions	316	342	334	658	689
Service charges	466	468	443	934	883
Underwriting and other advisory fees	554	345	457	899	998
Foreign exchange revenue, other than trading	243	249	277	492	558
Card service revenue	266	282	267	548	524
Credit fees	288	315	317	603	645
Net gains on investment securities	37	46	49	83	88
Share of profit in joint ventures and associates	14	15	14	29	39
Other	433	383	253	816	698
<b>Non-interest income</b>	<b>\$ 6,662</b>	<b>\$ 6,705</b>	<b>\$ 5,633</b>	<b>\$ 13,367</b>	<b>\$ 12,016</b>
<b>Total revenue</b>	<b>\$ 11,499</b>	<b>\$ 11,589</b>	<b>\$ 10,054</b>	<b>\$ 23,088</b>	<b>\$ 20,882</b>
<b>Additional information</b>					
Total trading revenue					
Net interest income	\$ 619	\$ 601	\$ 524	\$ 1,220	\$ 1,074
Non-interest income	250	358	236	608	554
<b>Total trading revenue</b>	<b>\$ 869</b>	<b>\$ 959</b>	<b>\$ 760</b>	<b>\$ 1,828</b>	<b>\$ 1,628</b>

**Q2 2019 vs. Q2 2018**

Total revenue increased \$1,445 million or 14% from last year, mainly due to an increase in insurance premiums, investment and fee income (Insurance revenue), higher net interest income and other revenue. The impact of foreign exchange translation also increased total revenue by \$92 million.

Net interest income increased \$416 million or 9%, largely due to volume growth and higher spreads in Canadian Banking and Wealth Management. Higher trading revenue and higher lending revenue in Capital Markets also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

NIM was down 4 bps compared to last year, mainly due to changes in average earning asset mix with volume growth primarily in reverse repos, and lower funding and liquidity revenue. These factors were partially offset by higher interest rates resulting in improved spreads on deposits in Canadian Banking and Wealth Management, as well as higher spreads in our trading portfolios in Capital Markets. The impact associated with lower funding and liquidity revenue was more than offset by the related gains on non-trading derivatives in Other revenue.

Insurance revenue increased \$709 million or 88%, primarily due to the change in fair value of investments backing our policyholder liabilities and business growth mainly from higher group annuity sales, both of which are largely offset in PBCAE.

Other revenue increased \$180 million or 71%, mainly due to 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. Gains on non-trading derivatives in our funding and liquidity business, which were largely offset in Net interest income also contributed to the increase. These factors were partially offset by lower net gains in our non-trading investment portfolios.

**Q2 2019 vs. Q1 2019**

Total revenue decreased \$90 million or 1% from the prior quarter, due to lower equity trading revenue primarily in the U.S., a decrease in Investment management and custodial fees driven by a favourable accounting adjustment in the prior period in Wealth Management and lower net interest income in Personal & Commercial Banking and Wealth Management, partly driven by three less days in the quarter. Lower Insurance revenue driven by lower group annuity and longevity reinsurance sales, partially offset by the change in the fair value of investments backing our policyholder liabilities, both of which were largely offset in PBCAE, also contributed to the decrease. These factors were partially offset by higher debt origination in most regions and higher fixed income trading and equity origination largely in North America.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Total revenue increased \$2,206 million or 11% from the prior quarter, primarily due to higher Insurance revenue, net interest income, investment management and custodial fees, and other revenue. The impact of foreign exchange translation also increased total revenue by \$278 million. These factors were partially offset by lower underwriting and advisory fees.

Net interest income increased \$855 million or 10%, largely due to volume growth and higher spreads in Canadian Banking and Wealth Management. Higher trading revenue and higher lending revenue in Capital Markets also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

Insurance revenue increased \$1,144 million or 59%, mainly reflecting the change in fair value of investments backing our policyholder liabilities and business growth, including higher group annuity sales, both of which were largely offset in PBCAE.

Investment management and custodial fees increased \$188 million or 7%, driven by higher average fee-based clients reflecting market appreciation and net sales in Wealth Management.

Underwriting and other advisory fees decreased \$99 million or 10%, due to lower equity and debt origination largely in North America.

Other revenue increased \$118 million or 17%, mainly due to gains on non-trading derivatives in our funding and liquidity business, which were largely offset in Net interest income. 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, also contributed to the increase. These factors were partially offset by lower net gains in our non-trading investment portfolios, a favourable accounting adjustment related to City National Bank (City National) in the prior year, and a gain relating to the reorganization of Interac in the prior year.

### Provision for credit losses

#### Q2 2019 vs. Q2 2018

Total PCL in Q2 2019 of \$426 million increased \$152 million or 55%.

PCL on loans of \$441 million increased \$163 million, or 59% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, Wealth Management and Capital Markets. The PCL ratio on loans of 29 bps increased 9 bps.

#### Q2 2019 vs. Q1 2019

Total PCL decreased \$88 million or 17% from the prior quarter.

PCL on loans of \$441 million decreased \$75 million, or 15% from the prior quarter, mainly due to lower provisions in Capital Markets, partially offset by higher provisions in Personal & Commercial Banking. The PCL ratio on loans improved 5 bps.

#### Q2 2019 vs. Q2 2018 (Six months ended)

Total PCL increased \$332 million or 55% from the prior year.

PCL on loans of \$957 million increased \$345 million, or 56% from the prior year, mainly due to higher provisions in Capital Markets, Personal & Commercial Banking and Wealth Management. The PCL ratio on loans of 32 bps increased 10 bps.

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

### Insurance policyholder benefits, claims and acquisition expense (PBCAE)

#### Q2 2019 vs. Q2 2018

PBCAE increased \$739 million from a year ago, mainly reflecting the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which were largely offset in revenue. Lower favourable investment-related experience and higher disability and life retrocession claims costs also contributed to the increase. These factors were partially offset by favourable life retrocession contract renegotiations and favourable actuarial adjustments related to the universal life portfolio.

#### Q2 2019 vs. Q1 2019

PBCAE decreased \$65 million or 5% from the prior quarter, mainly due to higher business growth in the prior period, including group annuity sales which was largely offset in revenue, and favourable actuarial adjustments related to the universal life portfolio. These factors were partially offset by the change in fair value of investments backing our policyholder liabilities, which was also largely offset in revenue, and higher claims costs in International Insurance.

#### Q2 2019 vs. Q2 2018 (Six months ended)

PBCAE increased \$1,128 million or 90% from the prior year, mainly reflecting the change in fair value of investments backing our policyholder liabilities and higher group annuity sales, both of which were largely offset in revenue. Growth in longevity reinsurance and lower favourable investment-related experience also contributed to the increase. These factors were partially offset by favourable life retrocession contract renegotiations.

### Non-interest expense

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Salaries	\$ 1,607	\$ 1,608	\$ 1,482	\$ 3,215	\$ 2,948
Variable compensation	1,430	1,388	1,338	2,818	2,722
Benefits and retention compensation	471	492	465	963	945
Share-based compensation	114	155	39	269	211
Human resources	\$ 3,622	\$ 3,643	\$ 3,324	\$ 7,265	\$ 6,826
Equipment	445	431	386	876	758
Occupancy	405	397	386	802	765
Communications	273	240	249	513	473
Professional fees	290	305	321	595	602
Amortization of other intangibles	299	290	266	589	527
Other	582	606	550	1,188	1,142
<b>Non-interest expense</b>	<b>\$ 5,916</b>	<b>\$ 5,912</b>	<b>\$ 5,482</b>	<b>\$ 11,828</b>	<b>\$ 11,093</b>
<b>Efficiency ratio <sup>(1)</sup></b>	<b>51.4%</b>	<b>51.0%</b>	<b>54.5%</b>	<b>51.2%</b>	<b>53.1%</b>
<b>Efficiency ratio adjusted <sup>(2)</sup></b>	<b>53.2%</b>	<b>52.1%</b>	<b>53.6%</b>	<b>52.7%</b>	<b>52.7%</b>

(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.



**Q2 2019 vs. Q2 2018**

Non-interest expense increased \$434 million or 8%, largely due to the change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue and higher variable compensation on improved results. In addition, increased costs in support of business growth and higher staff-related costs, the impact of foreign exchange translation and an increase in technology and related costs, including digital initiatives, also contributed to the increase.

Our efficiency ratio of 51.4% decreased 310 bps from 54.5% last year. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.2% decreased 40 bps from 53.6% last year.

**Q2 2019 vs. Q1 2019**

Non-interest expense increased \$4 million.

Our efficiency ratio of 51.4% increased 40 bps from 51.0% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.2% increased 110 bps from 52.1% last quarter.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Non-interest expense increased \$735 million or 7%, primarily attributable to increased costs in support of business growth and higher staff-related costs, the impact of foreign exchange translation, and an increase in technology and related costs, including digital initiatives. Higher variable compensation on improved results, and 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.

Our efficiency ratio of 51.2% decreased 190 bps from 53.1%. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 52.7% remained unchanged from last year.

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			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
<b>Income taxes</b>	\$ 767	\$ 766	\$ 817	\$ 1,533	\$ 1,852
<b>Income before income taxes</b>	\$ 3,997	\$ 3,938	\$ 3,877	\$ 7,935	\$ 7,924
Canadian statutory income tax rate (1)	26.5%	26.5%	26.5%	26.5%	26.5%
Lower average tax rate applicable to subsidiaries (2)	(4.8)%	(5.1)%	(4.3)%	(5.0)%	(3.7)%
Tax-exempt income from securities	(1.9)%	(1.8)%	(1.8)%	(1.8)%	(1.7)%
Tax rate change	(0.1)%	0.5%	–%	0.2%	1.9%
Other	(0.5)%	(0.6)%	0.7%	(0.6)%	0.4%
<b>Effective income tax rate</b>	<b>19.2%</b>	<b>19.5%</b>	<b>21.1%</b>	<b>19.3%</b>	<b>23.4%</b>

(1) Blended Federal and Provincial statutory income tax rate.

(2) As the reduced tax rates from the U.S. Tax Reform were effective on January 1, 2018, the Lower average tax rate applicable to subsidiaries for the three and six months ended April 30, 2018 reflects the fiscal 2018 blended rate for U.S. subsidiaries.

**Q2 2019 vs. Q2 2018**

Income tax expense decreased \$50 million or 6% from last year, due to higher income from lower tax rate jurisdictions and higher favourable tax adjustments in the current quarter, partially offset by higher Income before income taxes.

The effective income tax rate of 19.2% decreased 190 bps, mainly due to higher income from lower tax rate jurisdictions and favourable tax adjustments in the current quarter.

**Q2 2019 vs. Q1 2019**

Income tax expense increased \$1 million from last quarter, primarily due to higher Income before income taxes, offset by a write-down of deferred tax assets in the previous quarter resulting from a change in the corporate tax rate in Barbados.

The effective income tax rate of 19.2% decreased 30 bps, mainly due to the write-down of deferred tax assets in the previous quarter as noted above, partially offset by lower favourable tax adjustments in the current quarter.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Income tax expense decreased \$319 million or 17% from last year, and the effective income tax rate of 19.3% decreased 410 bps, primarily due to the impact of the U.S. Tax Reform, which resulted in the write-down of net deferred tax assets in the prior year, an increase in income from lower tax rate jurisdictions and higher favourable tax adjustments in the current year.

## 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, 2018.

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 2018 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 2018 Annual Report.

The following table provides a summary of our ROE calculations:

(Millions of Canadian dollars, except percentage amounts)	For the three months ended								January 31 2019	April 30 2018
	April 30 2019							Total		
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total		Total	Total
Net income available to common shareholders	\$ 1,526	\$ 573	\$ 152	\$ 148	\$ 756	\$ 6	\$ 3,161	\$ 3,096	\$ 2,979	
Total average common equity <sup>(1) (2)</sup>	23,000	14,200	1,950	3,500	22,800	8,550	74,000	73,550	67,450	
ROE <sup>(3)</sup>	27.2%	16.5%	32.4%	17.4%	13.6%	n.m.	17.5%	16.7%	18.1%	

(Millions of Canadian dollars, except percentage amounts)	For the six months ended								April 30 2018
	April 30 2019							Total	
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total		Total
Net income available to common shareholders	\$ 3,072	\$ 1,156	\$ 316	\$ 305	\$ 1,386	\$ 22	\$ 6,257	\$ 5,908	
Total average common equity <sup>(1) (2)</sup>	23,000	14,150	1,900	3,550	23,000	8,200	73,800	67,150	
ROE <sup>(3)</sup>	26.9%	16.5%	33.5%	17.3%	12.2%	n.m.	17.1%	17.7%	

(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 and six months ended April 30, 2019 with the corresponding period in the prior year and the three months ended January 31, 2019, as well as, in the case of economic profit, measure relative contribution to shareholder value. 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.

### Economic profit

Economic profit is net income excluding the after-tax effect of amortization of other intangibles less a capital charge for use of attributed capital. It measures the return generated by our businesses in excess of our cost of shareholders' equity, thus enabling users to identify relative contributions to shareholder value.

The capital charge includes a charge for common equity and preferred shares. For 2019, our cost of common equity remains unchanged at 8.5%.

### Economic profit

(Millions of Canadian dollars)	For the three months ended							January 31	April 30
	April 30 2019							2019	2018
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income	\$ 1,549	\$ 585	\$ 154	\$ 151	\$ 776	\$ 15	\$ 3,230	\$ 3,172	\$ 3,060
add: Non-controlling interests	(3)	–	–	–	–	(1)	(4)	(2)	(9)
After-tax effect of amortization of other intangibles	2	51	–	3	–	–	56	54	55
Adjusted net income (loss)	\$ 1,548	\$ 636	\$ 154	\$ 154	\$ 776	\$ 14	\$ 3,282	\$ 3,224	\$ 3,106
less: Capital charge	497	307	42	76	493	185	1,600	1,649	1,468
Economic profit (loss)	\$ 1,051	\$ 329	\$ 112	\$ 78	\$ 283	\$ (171)	\$ 1,682	\$ 1,575	\$ 1,638

(Millions of Canadian dollars)	For the six months ended							April 30
	April 30 2019							2018
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income	\$ 3,120	\$ 1,182	\$ 320	\$ 312	\$ 1,429	\$ 39	\$ 6,402	\$ 6,072
add: Non-controlling interests	(5)	–	–	–	–	(1)	(6)	(20)
After-tax effect of amortization of other intangibles	5	100	–	5	–	–	110	109
Adjusted net income (loss)	\$ 3,120	\$ 1,282	\$ 320	\$ 317	\$ 1,429	\$ 38	\$ 6,506	\$ 6,161
less: Capital charge	1,013	622	84	157	1,012	361	3,249	2,973
Economic profit (loss)	\$ 2,107	\$ 660	\$ 236	\$ 160	\$ 417	\$ (323)	\$ 3,257	\$ 3,188

### Results excluding specified item

- For the six months ended April 30, 2017, our share of a gain related to the sale by our payment processing joint venture Moneris of its U.S. operations to Vantiv, Inc., which was \$212 million (before- and after-tax) and recorded in Canadian Banking.

There were no specified items for the three months ended April 30, 2019, January 31, 2019, and April 30, 2018, or for the six months ended April 30, 2019 and April 30, 2018.

The following table provides calculations of our Canadian Banking results and measures excluding the specified item for the six months ended April 30, 2017 for the purpose of calculating the adjusted operating leverage ratio for the six months ended April 30, 2018, which is a non-GAAP measure:

### Canadian Banking

(Millions of Canadian dollars, except percentage amounts)	For the six months ended		
	April 30 2017		
	As reported	Item excluded Gain related to the sale by Moneris (1)	Adjusted
<b>Total revenue</b>	\$ 7,382	\$ (212)	\$ 7,170
PCL	506	–	506
Non-interest expense	3,087	–	3,087
Net income before income taxes	\$ 3,789	\$ (212)	\$ 3,577
<b>Net income</b>	\$ 2,862	\$ (212)	\$ 2,650
<b>Other information</b>			
Non-interest expense	\$ 3,087	\$ –	\$ 3,087
Total revenue	7,382	(212)	7,170
Efficiency ratio	41.8%		43.1%
Revenue growth rate	7.2%		4.1%
Non-interest expense growth rate	2.4%		2.4%
Operating leverage	4.8%		1.7%

(1) Includes foreign currency translation.

**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								
	April 30 2019			January 31 2019			April 30 2018		
	As reported	Item excluded		As reported	Item excluded		As reported	Item excluded	
Change in fair value of investments backing policyholder liabilities		Adjusted	Change in fair value of investments backing policyholder liabilities		Adjusted	Change in fair value of investments backing policyholder liabilities		Adjusted	
Total revenue	\$ 11,499	\$ (383)	\$ 11,116	\$ 11,589	\$ (247)	\$ 11,342	\$ 10,054	\$ 174	\$ 10,228
Non-interest expense	5,916	–	5,916	5,912	–	5,912	5,482	–	5,482
Efficiency ratio	51.4%		53.2%	51.0%		52.1%	54.5%		53.6%

(Millions of Canadian dollars, except percentage amounts)	For the six months ended					
	April 30 2019			April 30 2018		
	As reported	Item excluded		As reported	Item excluded	
Change in fair value of investments backing policyholder liabilities		Adjusted	Change in fair value of investments backing policyholder liabilities		Adjusted	
Total revenue	\$ 23,088	\$ (630)	\$ 22,458	\$ 20,882	\$ 148	\$ 21,030
Non-interest expense	11,828	–	11,828	11,093	–	11,093
Efficiency ratio	51.2%		52.7%	53.1%		52.7%

**Personal & Commercial Banking**

(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Net interest income	\$ 3,060	\$ 3,134	\$ 2,852	\$ 6,194	\$ 5,708
Non-interest income	1,273	1,284	1,251	2,557	2,560
<b>Total revenue</b>	<b>4,333</b>	<b>4,418</b>	<b>4,103</b>	<b>8,751</b>	<b>8,268</b>
PCL on performing assets	9	35	18	44	59
PCL on impaired assets	363	313	282	676	558
<b>PCL</b>	<b>372</b>	<b>348</b>	<b>300</b>	<b>720</b>	<b>617</b>
Non-interest expense	1,887	1,915	1,828	3,802	3,629
<b>Income before income taxes</b>	<b>2,074</b>	<b>2,155</b>	<b>1,975</b>	<b>4,229</b>	<b>4,022</b>
<b>Net income</b>	<b>\$ 1,549</b>	<b>\$ 1,571</b>	<b>\$ 1,459</b>	<b>\$ 3,120</b>	<b>\$ 2,980</b>
<b>Revenue by business</b>					
Canadian Banking	\$ 4,099	\$ 4,170	\$ 3,871	\$ 8,269	\$ 7,798
Caribbean & U.S. Banking	234	248	232	482	470
<b>Selected balance sheet and other information</b>					
ROE	27.2%	26.6%	27.8%	26.9%	28.2%
NIM	2.85%	2.84%	2.79%	2.85%	2.76%
Efficiency ratio	43.5%	43.3%	44.6%	43.4%	43.9%
Operating leverage	2.4%	(0.2)%	1.0%	1.0%	0.7%
Effective income tax rate	25.3%	27.1%	26.1%	26.2%	25.9%
Average total earning assets, net	\$ 440,300	\$ 437,100	\$ 419,200	\$ 438,700	\$ 417,400
Average loans and acceptances, net	441,900	438,100	419,900	440,000	417,900
Average deposits	389,000	382,200	357,900	385,500	357,500
AUA (1)	283,300	268,500	269,100	283,300	269,100
Average AUA	277,900	264,000	268,900	270,800	268,700
PCL on impaired loans as a % of average net loans and acceptances	0.34%	0.28%	0.28%	0.31%	0.27%
<b>Other selected information – Canadian Banking</b>					
Net income	\$ 1,460	\$ 1,544	\$ 1,426	\$ 3,004	\$ 2,906
NIM	2.80%	2.79%	2.74%	2.79%	2.71%
Efficiency ratio	42.0%	41.6%	42.6%	41.8%	42.0%
Operating leverage	1.7%	(0.2)%	0.7%	0.7%	(0.6)%
Operating leverage adjusted (2)	n.a.	n.a.	n.a.	n.a.	2.6%
Effective income tax rate	26.2%	26.3%	26.1%	26.3%	26.0%

(1) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at April 30, 2019 of \$16.2 billion and \$8.3 billion, respectively (January 31, 2019 – \$16.6 billion and \$8.5 billion; April 30, 2018 – \$17.8 billion and \$9.1 billion).

(2) This is a non-GAAP measure. The six months ended April 30, 2018 operating leverage of (0.6)% in Canadian Banking was impacted by our share of the gain related to the sale of the U.S. operations of Moneris of \$212 million (before- and after-tax) in Q1 2017, which was a specified item. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section. The six months ended April 30, 2018 revenue and expense growth rates in Canadian Banking were 5.6% and 6.2%, respectively. Excluding our share of the gain as noted above, the six months ended April 30, 2018 adjusted revenue growth rate was 8.8%.

n.a. not applicable

## Financial performance

### Q2 2019 vs. Q2 2018

Net income increased \$90 million or 6% from last year, mainly due to average volume growth of 7% and higher spreads in Canadian Banking, and higher service charges. These factors were partially offset by higher PCL, and an increase in technology related and marketing costs.

Total revenue increased \$230 million or 6%.

Canadian Banking revenue increased \$228 million or 6% compared to last year, largely reflecting average volume growth of 5% in loans and 9% in deposits and improved spreads, and higher service charges.

Caribbean & U.S. Banking revenue increased \$2 million or 1% compared to last year.

Net interest margin was up 6 bps, mainly due to improved spreads on deposits in Canadian Banking, reflecting higher interest rates, partially offset by the impact of competitive pricing pressures.

PCL increased \$72 million or 24%, driving an increase of 6 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$59 million or 3%, primarily attributable to an increase in technology and related costs, including digital initiatives, and higher marketing costs.

### Q2 2019 vs. Q1 2019

Net income decreased \$22 million or 1% from last quarter, reflecting three less days in the quarter, higher PCL and an increase in marketing costs. These factors were partially offset by lower staff related costs and improved spreads in Canadian Banking. The prior quarter also included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados.

Net interest margin was up 1 bp.

### Q2 2019 vs. Q2 2018 (Six months ended)

Net income increased \$140 million or 5% from last year, reflecting average volume growth of 6% and higher spreads. These factors were partially offset by an increase in PCL, higher technology and staff related costs, and higher marketing costs.

Total revenue increased \$483 million or 6% from last year, mainly driven by average volume growth of 5% in loans and 8% in deposits. Improved spreads reflecting higher interest rates, partially offset by the impact of competitive pricing pressures, also contributed to the increase.

PCL increased \$103 million or 17%, resulting in an increase of 4 bps in the PCL on impaired loans ratio. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$173 million or 5%, largely reflecting an increase in technology and related costs, including digital initiatives, staff related costs, and marketing costs.



## Wealth Management

(Millions of Canadian dollars, except number of, percentage amounts and as otherwise noted)	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Net interest income	\$ 731	\$ 744	\$ 632	\$ 1,475	\$ 1,244
Non-interest income					
Fee-based revenue	1,663	1,714	1,570	3,377	3,159
Transaction and other revenue	585	490	403	1,075	985
<b>Total revenue</b>	<b>2,979</b>	<b>2,948</b>	<b>2,605</b>	<b>5,927</b>	<b>5,388</b>
PCL on performing assets	13	15	(21)	28	(28)
PCL on impaired assets	17	11	1	28	6
<b>PCL</b>	<b>30</b>	<b>26</b>	<b>(20)</b>	<b>56</b>	<b>(22)</b>
Non-interest expense	2,204	2,164	1,939	4,368	3,950
<b>Income before income taxes</b>	<b>745</b>	<b>758</b>	<b>686</b>	<b>1,503</b>	<b>1,460</b>
<b>Net income</b>	<b>\$ 585</b>	<b>\$ 597</b>	<b>\$ 537</b>	<b>\$ 1,182</b>	<b>\$ 1,134</b>
<b>Revenue by business</b>					
Canadian Wealth Management	\$ 808	\$ 842	\$ 742	\$ 1,650	\$ 1,491
U.S. Wealth Management (including City National)	1,539	1,471	1,255	3,010	2,639
U.S. Wealth Management (including City National) (US\$ millions)	1,155	1,103	977	2,258	2,077
Global Asset Management	538	543	516	1,081	1,072
International Wealth Management	94	92	92	186	186
<b>Selected balance sheet and other information</b>					
ROE	16.5%	16.4%	15.8%	16.5%	16.5%
NIM	3.66%	3.67%	3.47%	3.66%	3.37%
Pre-tax margin (1)	25.0%	25.7%	26.3%	25.4%	27.1%
Number of advisors (2)	5,176	5,119	4,912	5,176	4,912
Average total earning assets, net	\$ 81,900	\$ 80,500	\$ 74,800	\$ 81,200	\$ 74,500
Average loans and acceptances, net	62,200	61,200	54,800	61,700	53,600
Average deposits	93,000	94,300	93,000	93,600	92,800
AUA (3)	1,050,900	981,400	944,600	1,050,900	944,600
U.S. Wealth Management (including City National) (3)	537,200	496,500	458,500	537,200	458,500
U.S. Wealth Management (including City National) (US\$ millions) (3)	400,900	378,000	357,300	400,900	357,300
AUM (3)	726,600	682,000	655,000	726,600	655,000
Average AUA	1,027,300	986,800	947,000	1,006,700	942,700
Average AUM (4)	712,200	675,100	655,800	693,300	652,000
PCL on impaired loans as a % of average net loans and acceptances	0.12%	0.07%	0.01%	0.09%	0.02%

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		For the six months ended
	Q2 2019 vs. Q2 2018	Q2 2019 vs. Q1 2019	Q2 2019 vs. Q2 2018
<b>Increase (decrease):</b>			
Total revenue	\$ 48	\$ (3)	\$ 130
Non-interest expense	39	(4)	103
Net income	6	1	20
Percentage change in average U.S. dollar equivalent of C\$1.00	(3)%	–%	(5)%
Percentage change in average British pound equivalent of C\$1.00	2%	(2)%	1%
Percentage change in average Euro equivalent of C\$1.00	5%	2%	2%

(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.

(4) Amounts in the prior year have been revised from those previously presented.

## Financial performance

## Q2 2019 vs. Q2 2018

Net income increased \$48 million or 9%, primarily attributable to higher net interest income and higher average fee-based client assets. These factors were partially offset by increased costs in support of business growth and higher PCL.

Total revenue increased \$374 million or 14%.

Canadian Wealth Management revenue increased \$66 million or 9%, primarily due to higher average fee-based client assets reflecting net sales and market appreciation.

U.S. Wealth Management (including City National) revenue increased \$284 million or 23%. In U.S. dollars, revenue increased \$178 million or 18%, primarily due to 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 an increase in net interest income due to volume growth and higher spreads.

Global Asset Management revenue increased \$22 million or 4%, mainly due to higher average fee-based assets under management reflecting market appreciation and net sales.

PCL increased \$50 million. PCL on performing assets increased \$34 million from \$(21) million in the prior year due to higher repayments and maturities in the prior year in U.S. Wealth Management (including City National). Higher provisions on impaired loans in U.S. Wealth Management (including City National) and higher recoveries in the prior year also contributed to the increase. PCL on impaired loans ratio increased 11 bps. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$265 million or 14%, mainly due to the change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue, and increased costs in support of business growth mainly reflecting higher staff-related costs. Higher variable compensation on improved results and the impact of foreign exchange translation also contributed to the increase.

## Q2 2019 vs. Q1 2019

Net income decreased \$12 million or 2%, primarily reflecting a favourable accounting adjustment related to Canadian Wealth Management in the prior period, and lower net interest income as volume growth was more than offset by lower spreads and three less days in the quarter. These factors were partially offset by higher transaction volumes.

## Q2 2019 vs. Q2 2018 (Six months ended)

Net income increased \$48 million or 4% from a year ago, primarily reflecting an increase in net interest income, higher fee-based client assets, and the impact of foreign exchange translation. These factors were partially offset by increased costs in support of business growth, higher PCL, and higher variable compensation on improved results.

Total revenue increased \$539 million or 10%, mainly due to higher net interest income driven by volume growth and higher interest rates, the impact of foreign exchange translation, and 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, also contributed to the increase.

PCL increased \$78 million. PCL on performing assets increased \$56 million from \$(28) million due to higher repayments and maturities in the prior year in U.S. Wealth Management (including City National). The current year also reflected unfavourable changes in macroeconomic variables compared to last year. Higher provisions on impaired loans in U.S. Wealth Management (including City National) and higher recoveries in the prior year also contributed to the increase. PCL on impaired loans ratio increased 7 bps. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$418 million or 11%, mainly due to increased costs in support of business growth largely reflecting higher staff-related costs, the impact of foreign exchange translation, and higher variable compensation on improved results. The change in the fair value of our U.S. share-based compensation plans, which was largely offset in revenue, and higher regulatory costs also contributed to the increase.

## Insurance

	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)					
Non-interest income					
Net earned premiums	\$ 964	\$ 1,162	\$ 824	\$ 2,126	\$ 1,763
Investment income (1)	515	381	(87)	896	79
Fee income	36	36	69	72	108
<b>Total revenue</b>	<b>1,515</b>	<b>1,579</b>	<b>806</b>	<b>3,094</b>	<b>1,950</b>
Insurance policyholder benefits and claims (1)	1,077	1,129	351	2,206	1,119
Insurance policyholder acquisition expense	83	96	70	179	138
Non-interest expense	150	154	148	304	290
<b>Income before income taxes</b>	<b>205</b>	<b>200</b>	<b>237</b>	<b>405</b>	<b>403</b>
<b>Net income</b>	<b>\$ 154</b>	<b>\$ 166</b>	<b>\$ 172</b>	<b>\$ 320</b>	<b>\$ 299</b>
<b>Revenue by business</b>					
Canadian Insurance	\$ 1,004	\$ 1,039	\$ 310	\$ 2,043	\$ 931
International Insurance	511	540	496	1,051	1,019
<b>Selected balances and other information</b>					
ROE	32.4%	34.7%	36.3%	33.5%	32.3%
Premiums and deposits (2)	\$ 1,106	\$ 1,314	\$ 981	\$ 2,420	\$ 2,076
Fair value changes on investments backing policyholder liabilities (1)	383	247	(174)	630	(148)

(1) Investment income can experience volatility arising from fluctuation of assets designated as fair value through profit and loss (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

### Q2 2019 vs. Q2 2018

Net income decreased \$18 million or 10% from a year ago, primarily reflecting lower favourable investment-related experience and increased disability and life retrocession claims costs, partially offset by favourable life retrocession contract renegotiations and favourable actuarial adjustments.

Total revenue increased \$709 million or 88%.

Canadian Insurance revenue increased \$694 million, primarily due to the change in fair value of investments backing our policyholder liabilities and business growth mainly from higher group annuity sales, both of which are largely offset in PBCAE as indicated below.

International Insurance revenue increased \$15 million or 3%, mainly due to the change in fair value of investments backing our policyholder liabilities, which is largely offset in PBCAE as indicated below, and business growth in longevity reinsurance.

PBCAE increased \$739 million, mainly reflecting the change in fair value of investments backing our policyholder liabilities and business growth. Lower favourable investment-related experience and higher disability and life retrocession claims costs also contributed to the increase. These factors were partially offset by favourable life retrocession contract renegotiations and favourable actuarial adjustments related to the universal life portfolio.

Non-interest expense increased \$2 million or 1%, largely reflecting higher costs related to regulatory initiatives.

### Q2 2019 vs. Q1 2019

Net income decreased \$12 million or 7%, mainly due to higher claims costs in International Insurance, partially offset by favourable actuarial adjustments related to the universal life portfolio.

### Q2 2019 vs. Q2 2018 (Six months ended)

Net income increased \$21 million or 7% from a year ago, primarily reflecting favourable life retrocession contract renegotiations, partially offset by lower favourable investment-related experience.

Total revenue increased \$1,144 million or 59% compared to the prior year, mainly reflecting the change in fair value of investments backing our policyholder liabilities and business growth, including higher group annuity sales, both of which are largely offset in PBCAE as indicated below.

PBCAE increased \$1,128 million or 90%, mainly reflecting the change in fair value of investments backing our policyholder liabilities, business growth, and lower favourable investment-related experience. These factors were partially offset by favourable life retrocession contract renegotiations.

Non-interest expense increased \$14 million or 5%, largely reflecting higher costs related to regulatory initiatives and an increase in costs to support sales and client service activities.

## Investor & Treasury Services

	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)					
Net interest income	\$ (34)	\$ (31)	\$ 118	\$ (65)	\$ 246
Non-interest income	621	662	553	1,283	1,101
<b>Total revenue</b>	<b>587</b>	<b>631</b>	<b>671</b>	<b>1,218</b>	<b>1,347</b>
Non-interest expense	388	418	391	806	780
<b>Net income before income taxes</b>	<b>199</b>	<b>213</b>	<b>280</b>	<b>412</b>	<b>567</b>
<b>Net income</b>	<b>\$ 151</b>	<b>\$ 161</b>	<b>\$ 212</b>	<b>\$ 312</b>	<b>\$ 431</b>
<b>Selected balance sheet and other information</b>					
ROE	17.4%	17.3%	28.1%	17.3%	27.5%
Average deposits	\$ 173,900	\$ 171,900	\$ 163,600	\$ 172,900	\$ 159,400
Average client deposits	58,200	59,200	58,200	58,700	57,500
Average wholesale funding deposits	115,700	112,700	105,400	114,200	101,900
AUA (1)	4,307,800	4,100,900	4,439,800	4,307,800	4,439,800
Average AUA	4,271,000	4,191,300	4,502,800	4,230,500	4,470,500

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		For the six months ended
	Q2 2019 vs. Q2 2018	Q2 2019 vs. Q1 2019	Q2 2019 vs. Q2 2018
<i>Increase (decrease):</i>			
Total revenue	\$ (10)	\$ (3)	\$ (8)
Non-interest expense	(8)	(2)	(8)
Net income	(2)	(1)	–
Percentage change in average U.S. dollar equivalent of C\$1.00	(3)%	–%	(5)%
Percentage change in average British pound equivalent of C\$1.00	2%	(2)%	1%
Percentage change in average Euro equivalent of C\$1.00	5%	2%	2%

(1) Represents period-end spot balances.

## Financial performance

### Q2 2019 vs. Q2 2018

Net income decreased \$61 million or 29%, primarily due to lower funding and liquidity revenue and lower revenue from our asset services business.

Total revenue decreased \$84 million or 13%, mainly due to lower funding and liquidity revenue, including gains from the disposition of certain securities in the prior year, lower revenue from our asset services business due to lower client activity, as well as the impact of foreign exchange translation.

Non-interest expense decreased \$3 million or 1%, largely driven by the impact of foreign exchange translation, partially offset by higher costs in support of efficiency and technology initiatives.

### Q2 2019 vs. Q1 2019

Net income decreased \$10 million or 6%, primarily due to lower funding and liquidity revenue, including the favourable impact of money market opportunities in the prior quarter, partially offset by the impact of annual regulatory costs incurred in the prior period and lower technology costs.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Net income decreased \$119 million or 28%, largely due to lower funding and liquidity revenue, lower revenue from our asset services business and higher costs in support of efficiency and technology initiatives.

Total revenue decreased \$129 million or 10%, mainly due to lower funding and liquidity revenue driven by the impact of reduced money market opportunities in the current year and gains from the disposition of certain securities in the prior year. Lower revenue from our asset services business due to challenging market conditions throughout the earlier part of 2019 and lower client activity also contributed to the decrease.

Non-interest expense increased \$26 million or 3%, primarily driven by higher costs in support of efficiency and technology initiatives.

**Capital Markets**

	As at or for the three months ended			As at or for the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
<i>(Millions of Canadian dollars, except percentage amounts and as otherwise noted)</i>					
Net interest income (1)	\$ 1,057	\$ 1,006	\$ 841	\$ 2,063	\$ 1,707
Non-interest income (1)	1,112	1,092	1,169	2,204	2,478
<b>Total revenue (1)</b>	<b>2,169</b>	<b>2,098</b>	<b>2,010</b>	<b>4,267</b>	<b>4,185</b>
PCL on performing assets	(23)	38	(21)	15	(46)
PCL on impaired assets	48	102	14	150	59
<b>PCL</b>	<b>25</b>	<b>140</b>	<b>(7)</b>	<b>165</b>	<b>13</b>
Non-interest expense	1,289	1,230	1,190	2,519	2,404
<b>Net income before income taxes</b>	<b>855</b>	<b>728</b>	<b>827</b>	<b>1,583</b>	<b>1,768</b>
<b>Net income</b>	<b>\$ 776</b>	<b>\$ 653</b>	<b>\$ 665</b>	<b>\$ 1,429</b>	<b>\$ 1,413</b>
<b>Revenue by business</b>					
Corporate and Investment Banking	\$ 969	\$ 927	\$ 967	\$ 1,896	\$ 1,961
Global Markets	1,235	1,227	1,092	2,462	2,313
Other	(35)	(56)	(49)	(91)	(89)
<b>Selected balance sheet and other information</b>					
ROE	13.6%	10.8%	13.4%	12.2%	14.1%
Average total assets	\$ 648,900	\$ 643,700	\$ 563,700	\$ 646,200	\$ 567,000
Average trading securities	101,200	102,100	98,900	101,700	99,900
Average loans and acceptances, net	101,800	98,400	82,800	100,000	82,100
Average deposits	79,100	79,000	71,000	79,100	67,900
PCL on impaired loans as a % of average net loans and acceptances	0.19%	0.41%	0.07%	0.30%	0.15%

<b>Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items</b>	For the three months ended		For the six months ended
	Q2 2019 vs. Q2 2018	Q2 2019 vs. Q1 2019	Q2 2019 vs. Q2 2018
<i>(Millions of Canadian dollars, except percentage amounts)</i>			
<b>Increase (decrease):</b>			
Total revenue	\$ 43	\$ –	\$ 123
Non-interest expense	21	1	59
Net income	19	(1)	50
Percentage change in average U.S. dollar equivalent of C\$1.00	(3)%	–%	(5)%
Percentage change in average British pound equivalent of C\$1.00	2%	(2)%	1%
Percentage change in average Euro equivalent of C\$1.00	5%	2%	2%

(1) The taxable equivalent basis (teb) adjustment for the three months ended April 30, 2019 was \$120 million (January 31, 2019 – \$107 million; April 30, 2018 – \$151 million) and for the six months ended April 30, 2019 was \$227 million (April 30, 2018 – \$243 million). For further discussion, refer to the How we measure and report our business segments section of our 2018 Annual Report.

**Financial performance****Q2 2019 vs. Q2 2018**

Net income increased \$111 million or 17%, primarily due to higher revenue in Global Markets, and a lower effective tax rate largely reflecting changes in earnings mix. These factors were partially offset by higher compensation on improved results.

Total revenue increased \$159 million or 8%.

Corporate and Investment Banking revenue remained relatively flat as higher M&A and debt origination in the U.S., the impact of foreign exchange translation and higher lending revenue primarily in the U.S. were largely offset by lower municipal banking activity, lower M&A in Europe and lower loan syndication activity primarily in the U.S.

Global Markets revenue increased \$143 million or 13% due to improved market conditions and increased client activity. The increase was primarily driven by higher fixed income trading revenue across all regions, higher debt origination largely in the U.S. and Europe and the impact of foreign exchange translation. Higher equity trading in North America and increased equity origination primarily in the U.S. also contributed to the increase. These factors were partially offset by lower equity trading revenue largely in Europe.

Other revenue increased \$14 million largely reflecting lower residual funding costs, partially offset by gains in our legacy U.S. portfolios in the prior year.

PCL increased \$32 million, driving an increase of 12 bps in the PCL on impaired loans ratio, primarily due to provisions taken on a few accounts. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$99 million or 8%, mainly due to higher compensation on improved results, the impact of foreign exchange translation and higher technology and related costs.

**Q2 2019 vs. Q1 2019**

Net income increased \$123 million or 19% due to improved market conditions and higher client activity. The increase was primarily driven by higher debt origination in most regions, lower PCL, and higher fixed income trading and equity origination largely in North America. These factors were partially offset by lower equity trading revenue primarily in the U.S., higher compensation on improved results and lower foreign exchange trading largely in Canada.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Net income increased \$16 million or 1%, driven by a lower effective tax rate largely reflecting changes in earnings mix, higher revenue in Global Markets and the impact of foreign exchange translation. These factors were partially offset by higher PCL, lower revenue in Corporate and Investment Banking and increased technology and related costs.

Total revenue increased \$82 million or 2%, mainly driven by the impact of foreign exchange translation and higher equity trading revenue primarily in North America. These factors were partially offset by lower equity and debt origination largely in the North America and lower equity trading revenue mainly in Europe.

PCL increased \$152 million, largely driven by an increase in provisions on impaired loans taken on one account in the utilities sector and higher provisions on performing loans driven by unfavourable changes in macroeconomic variables compared to the prior year. PCL on impaired loans ratio increased 15 bps. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased \$115 million or 5%, largely reflecting the impact of foreign exchange translation and increased technology and related costs.

**Corporate Support**

(Millions of Canadian dollars)	For the three months ended			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
Net interest income (loss) (1)	\$ 23	\$ 31	\$ (22)	\$ 54	\$ (39)
Non-interest income (loss) (1)	(107)	(116)	(119)	(223)	(217)
<b>Total revenue (1)</b>	<b>(84)</b>	<b>(85)</b>	<b>(141)</b>	<b>(169)</b>	<b>(256)</b>
PCL	(1)	–	1	(1)	–
Non-interest expense	(2)	31	(14)	29	40
<b>Net income (loss) before income taxes (1)</b>	<b>(81)</b>	<b>(116)</b>	<b>(128)</b>	<b>(197)</b>	<b>(296)</b>
Income taxes (recoveries) (1)	(96)	(140)	(143)	(236)	(111)
<b>Net income (loss) (2)</b>	<b>\$ 15</b>	<b>\$ 24</b>	<b>\$ 15</b>	<b>\$ 39</b>	<b>\$ (185)</b>

(1) Teb adjusted.

(2) Net income reflects income attributable to both shareholders and Non-Controlling Interests (NCI). Net income attributable to NCI for the three months ended April 30, 2019 was \$1 million (January 31, 2019 – \$nil; April 30, 2018 – \$7 million) and for the six months ended April 30, 2019 was \$1 million (April 30, 2018 – \$16 million).

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 April 30, 2019 was \$120 million, as compared to \$107 million in the prior quarter and \$151 million last year. The teb amount for the six months ended April 30, 2019 was \$227 million, as compared to \$243 million in the prior year.

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

**Q2 2019**

Net income was \$15 million, largely due to asset/liability management activities, partially offset by net unfavourable tax adjustments.

**Q1 2019**

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

**Q2 2018**

Net income was \$15 million, largely due to asset/liability management activities.

**Q2 2019 (Six months ended)**

Net income was \$39 million, largely due to asset/liability management activities.

**Q2 2018 (Six months ended)**

Net loss was \$185 million, largely due to the impact of the U.S. Tax Reform of \$178 million, partially offset by asset/liability management activities.



## 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 <sup>(1)</sup>

(Millions of Canadian dollars, except per share and percentage amounts)	2019		2018			2017		
	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3
Personal & Commercial Banking	\$ 4,333	\$ 4,418	\$ 4,364	\$ 4,284	\$ 4,103	\$ 4,165	\$ 4,019	\$ 3,970
Wealth Management	2,979	2,948	2,740	2,798	2,605	2,783	2,562	2,547
Insurance	1,515	1,579	1,039	1,290	806	1,144	1,612	1,009
Investor & Treasury Services	587	631	624	620	671	676	602	594
Capital Markets <sup>(2)</sup>	2,169	2,098	2,056	2,157	2,010	2,175	1,954	2,040
Corporate Support <sup>(2)</sup>	(84)	(85)	(154)	(124)	(141)	(115)	(226)	(72)
<b>Total revenue</b>	<b>\$ 11,499</b>	<b>\$ 11,589</b>	<b>\$ 10,669</b>	<b>\$ 11,025</b>	<b>\$ 10,054</b>	<b>\$ 10,828</b>	<b>\$ 10,523</b>	<b>\$ 10,088</b>
PCL <sup>(3)</sup>	426	514	353	346	274	334	234	320
PBCAE	1,160	1,225	494	925	421	836	1,137	643
Non-interest expense	5,916	5,912	5,882	5,858	5,482	5,611	5,611	5,537
<b>Net income before income taxes</b>	<b>\$ 3,997</b>	<b>\$ 3,938</b>	<b>\$ 3,940</b>	<b>\$ 3,896</b>	<b>\$ 3,877</b>	<b>\$ 4,047</b>	<b>\$ 3,541</b>	<b>\$ 3,588</b>
Income taxes	767	766	690	787	817	1,035	704	792
<b>Net income</b>	<b>\$ 3,230</b>	<b>\$ 3,172</b>	<b>\$ 3,250</b>	<b>\$ 3,109</b>	<b>\$ 3,060</b>	<b>\$ 3,012</b>	<b>\$ 2,837</b>	<b>\$ 2,796</b>
EPS – basic	\$ 2.20	\$ 2.15	\$ 2.21	\$ 2.10	\$ 2.06	\$ 2.02	\$ 1.89	\$ 1.86
– diluted	2.20	2.15	2.20	2.10	2.06	2.01	1.88	1.85
<b>Segments – net income (loss)</b>								
Personal & Commercial Banking	\$ 1,549	\$ 1,571	\$ 1,538	\$ 1,510	\$ 1,459	\$ 1,521	\$ 1,404	\$ 1,399
Wealth Management	585	597	553	578	537	597	491	486
Insurance	154	166	318	158	172	127	265	161
Investor & Treasury Services	151	161	155	155	212	219	156	178
Capital Markets	776	653	666	698	665	748	584	611
Corporate Support	15	24	20	10	15	(200)	(63)	(39)
<b>Net income</b>	<b>\$ 3,230</b>	<b>\$ 3,172</b>	<b>\$ 3,250</b>	<b>\$ 3,109</b>	<b>\$ 3,060</b>	<b>\$ 3,012</b>	<b>\$ 2,837</b>	<b>\$ 2,796</b>
Effective income tax rate	19.2%	19.5%	17.5%	20.2%	21.1%	25.6%	19.9%	22.1%
Period average US\$ equivalent of C\$1.00	\$ 0.751	\$ 0.749	\$ 0.767	\$ 0.767	\$ 0.778	\$ 0.794	\$ 0.792	\$ 0.770

(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 of our 2018 Annual Report.

(3) Effective November 1, 2017, we adopted IFRS 9, *Financial Instruments*. Under IFRS 9, PCL relates primarily to loans, acceptances, and commitments, and also applies to all financial assets except for those classified or designated as FVTPL and equity securities designated as fair value through other comprehensive income (FVOCI). Prior to the adoption of IFRS 9, PCL related only to loans, acceptances, and commitments. PCL on loans, acceptances, and commitments is comprised of PCL on impaired loans (Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39) and PCL on performing loans (Stage 1 and Stage 2 PCL under IFRS 9 and PCL on loans not yet identified as impaired under IAS 39).

### 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 and our Wealth Management investment management 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, higher spreads since the latter half of 2017, and higher fee-based revenue.

Wealth Management revenue has generally trended upwards primarily due to growth in average fee-based client assets which benefitted from net sales and market appreciation, and the impact of higher interest rates and volume growth driving higher net interest income since the beginning of the period. 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. Since 2017, revenues have generally benefitted from the impact of new group annuity sales and restructured international life contracts, which are largely offset in PBCAE. We have also benefitted from business growth in Canadian and International Insurance throughout 2018 and the first half of 2019.

Investor & Treasury Services revenue is impacted by fluctuations in market conditions and client activity. The first half of 2018 trended higher due to generally higher market volatility, growth in client deposits, and increased client activity from our asset services business, combined with an improvement in funding & liquidity performance. Reduced money market opportunities in the current year and the impact of challenging market conditions impacted the first quarter of 2019. The second quarter of 2019 was impacted by lower client activity.

Capital Markets revenue is influenced, to a large extent, by market conditions and activity in the fixed income and equity trading 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. The first quarter of 2019 experienced higher equity and fixed income trading revenue, which was partially offset by lower debt and equity origination primarily in North America. Debt origination rallied in the second quarter of 2019 in most regions driving growth along with higher fixed income trading and equity origination largely in North America, partially offset by lower equity trading primarily in the U.S. and lower foreign exchange trading largely in Canada.

PCL saw a general improvement in 2017 due to lower provisions and higher recoveries in our Capital Markets and Personal & Commercial Banking portfolios and lower provisions on impaired assets for the majority of 2018. On November 1, 2017, we adopted IFRS 9, which resulted in the introduction of PCL on performing financial assets. PCL on performing assets has fluctuated over the period as it is impacted by macroeconomic conditions and volume growth. The fourth quarter of 2018 was also impacted by the restructuring of portfolios in Barbados. The first half of 2019 was impacted by higher provisions for impaired loans mainly relating to a few accounts in Capital Markets and Personal & Commercial Banking.

PBCAE has fluctuated quarterly as it includes the changes to the fair value of investments backing our policyholder liabilities, the impact of group annuity sales and restructured international life contracts, all of which are largely offset in Revenue. PBCAE has also increased due to business growth, and has been impacted by investment-related experience, and claims volumes over the period. The results are impacted by actuarial adjustments, which generally occur in the fourth quarter of each year.

Non-interest expense has fluctuated over the period and has remained relatively stable since the latter half of 2018. Growth over the period mainly reflects higher costs in support of business growth and our ongoing investments in technology and related costs, including digital initiatives. The increase in 2017 and 2018 mainly reflected higher variable compensation on improved results in Wealth Management and Capital Markets. The third quarter of 2017 was also impacted by higher severance costs. Fiscal 2018 was impacted by higher regulatory costs, and the decrease over the second and fourth quarter of 2018 mainly reflects the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Revenue. The small increase in the first quarter of 2019 also reflected the impact of foreign exchange translation and the change in the fair value of our U.S. share-based compensation plans, which was largely offset in Revenue, partially offset by seasonally lower marketing costs and lower professional fees.

Our effective income tax rate has fluctuated over the period, mostly due to varying levels of income reported in jurisdictions with different tax rates, as well as fluctuating levels of income from tax-advantaged sources and various levels of tax adjustments. The first quarter of 2018 was adversely impacted by the U.S. Tax Reform, which resulted in the write-down of net deferred tax assets, however, this was more than offset during 2018 by the ongoing lower corporate tax rate. The first quarter of 2019 included a write-down of deferred tax assets resulting from a change in the corporate tax rate in Barbados. Our effective income tax rate has generally been impacted over the period by net favourable tax adjustments and changes to the earnings mix.

## Financial condition

### Condensed balance sheets

	As at	
	April 30 2019	October 31 2018
(Millions of Canadian dollars)		
<b>Assets</b>		
Cash and due from banks	\$ 33,041	\$ 30,209
Interest-bearing deposits with banks	26,718	36,471
Securities, net of applicable allowance (1)	240,991	222,866
Assets purchased under reverse repurchase agreements and securities borrowed	309,520	294,602
Loans		
Retail	407,222	399,452
Wholesale	198,263	180,278
Allowance for loan losses	(3,093)	(2,912)
Other – Derivatives	84,812	94,039
– Other (2)	81,402	79,729
<b>Total assets</b>	<b>\$ 1,378,876</b>	<b>\$ 1,334,734</b>
<b>Liabilities</b>		
Deposits	\$ 864,101	\$ 837,046
Other – Derivatives	82,168	90,238
– Other (2)	341,301	318,364
Subordinated debentures	9,360	9,131
<b>Total liabilities</b>	<b>1,296,930</b>	<b>1,254,779</b>
<b>Equity attributable to shareholders</b>	<b>81,845</b>	<b>79,861</b>
Non-controlling interests	101	94
<b>Total equity</b>	<b>81,946</b>	<b>79,955</b>
<b>Total liabilities and equity</b>	<b>\$ 1,378,876</b>	<b>\$ 1,334,734</b>

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

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

**Q2 2019 vs. Q4 2018**

Total assets increased \$44 billion or 3% from October 31, 2018. Foreign exchange translation increased total assets by \$14 billion.

Cash and due from banks was up \$3 billion or 9%, mainly due to higher deposits with central banks, reflecting short-term cash management activities.

Interest-bearing deposits with banks decreased \$10 billion or 27%, primarily due to lower deposits with central banks, reflecting cash management activities.

Securities, net of applicable allowance, were up \$18 billion or 8%, largely due to higher government debt and corporate debt securities, reflecting our business activities. Higher equity trading securities reflecting favourable market conditions and the impact of foreign exchange translation also contributed to the increase.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased \$15 billion or 5%, largely attributable to client activity and the impact of foreign exchange translation, partially offset by higher financial netting.

Loans were up \$26 billion or 4%, primarily due to volume growth, which led to higher wholesale loans and residential mortgages.

Derivative assets were down \$9 billion or 10%, primarily attributable to lower fair values on foreign exchange contracts.

Total liabilities increased \$42 billion or 3%. Foreign exchange translation increased total liabilities by \$14 billion.

Deposits increased \$27 billion or 3%, mainly as a result of higher retail and business deposits, driven by increased client activities.

Derivative liabilities were down \$8 billion or 9%, primarily attributable to lower fair values on foreign exchange contracts.

Other liabilities increased \$23 billion or 7%, mainly attributable to higher obligations related to repurchase agreements largely due to increased client activity, funding requirements and the impact of foreign exchange translation, partially offset by higher financial netting.

Total equity increased \$2 billion or 2%, largely reflecting earnings, net of dividends and redemptions of preferred shares.

### 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 Q2 2019 Report to Shareholders. Our significant off-balance sheet transactions include those described on pages 47 to 49 of our 2018 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 2018 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.

(Millions of Canadian dollars)	As at							January 31 2019
	April 30 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	
	Undrawn	Other (4)						
<b>Retail</b>								
Residential secured (5)	\$ 303,318	\$ 62,677	\$ –	\$ –	\$ –	\$ 365,995	\$ 361,572	
Qualifying revolving (6)	25,682	70,125	–	–	–	95,807	95,227	
Other retail	57,211	14,417	73	–	–	71,701	69,859	
<b>Total retail</b>	<b>\$ 386,211</b>	<b>\$ 147,219</b>	<b>\$ 73</b>	<b>\$ –</b>	<b>\$ –</b>	<b>\$ 533,503</b>	<b>\$ 526,658</b>	
<b>Wholesale</b>								
Agriculture	\$ 9,005	\$ 1,691	\$ 40	\$ –	\$ 72	\$ 10,808	\$ 10,625	
Automotive	10,678	6,551	340	–	1,253	18,822	18,525	
Banking	45,599	1,880	542	54,340	19,736	122,097	114,181	
Consumer discretionary	15,745	8,447	784	2	464	25,442	25,713	
Consumer staples	5,026	6,844	513	–	1,022	13,405	13,213	
Oil & gas	7,198	10,883	1,547	–	1,969	21,597	20,462	
Financial services	25,307	21,633	3,243	116,252	18,961	185,396	174,544	
Financing products	701	1,421	511	128	771	3,532	4,282	
Forest products	1,490	593	95	–	51	2,229	2,327	
Governments	102,858	7,765	1,508	4,460	5,982	122,573	142,500	
Industrial products	7,459	8,333	585	1	644	17,022	16,192	
Information technology	5,143	6,485	173	16	3,649	15,466	16,557	
Investments	16,410	952	403	13	210	17,988	17,494	
Mining & metals	1,915	4,516	816	–	197	7,444	6,739	
Public works & infrastructure	1,895	1,769	463	–	181	4,308	4,326	
Real estate & related	59,170	11,495	1,370	–	666	72,701	70,151	
Other services	24,718	10,617	888	–	1,152	37,375	38,656	
Telecommunication & media	9,404	9,324	151	–	1,741	20,620	20,134	
Transportation	6,008	5,875	2,225	–	1,574	15,682	15,337	
Utilities	9,006	19,238	4,128	–	3,069	35,441	35,968	
Other sectors	2,512	439	1	13	18,685	21,650	19,656	
<b>Total wholesale</b>	<b>\$ 367,247</b>	<b>\$ 146,751</b>	<b>\$ 20,326</b>	<b>\$ 175,225</b>	<b>\$ 82,049</b>	<b>\$ 791,598</b>	<b>\$ 787,582</b>	
<b>Total exposure (7)</b>	<b>\$ 753,458</b>	<b>\$ 293,970</b>	<b>\$ 20,399</b>	<b>\$ 175,225</b>	<b>\$ 82,049</b>	<b>\$ 1,325,101</b>	<b>\$ 1,314,240</b>	
<b>By geography (8)</b>								
Canada	\$ 532,143	\$ 212,727	\$ 9,636	\$ 72,993	\$ 35,196	\$ 862,695	\$ 851,118	
U.S.	135,962	59,127	9,285	46,550	19,210	270,134	272,692	
Europe	50,627	19,420	1,397	52,302	23,043	146,789	148,477	
Other International	34,726	2,696	81	3,380	4,600	45,483	41,953	
<b>Total exposure (7)</b>	<b>\$ 753,458</b>	<b>\$ 293,970</b>	<b>\$ 20,399</b>	<b>\$ 175,225</b>	<b>\$ 82,049</b>	<b>\$ 1,325,101</b>	<b>\$ 1,314,240</b>	

(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.

**Q2 2019 vs. Q1 2019**

Total credit risk exposure increased \$11 billion or 1% from the prior quarter, primarily due to growth in loans and acceptances, the impact of foreign exchange translation and higher derivatives, partially offset by lower deposits with central banks.

Retail exposure increased \$7 billion or 1%, largely driven by growth in our residential secured portfolios.

Wholesale exposure increased \$4 billion or 1%, primarily driven by the impact of foreign exchange translation, higher derivatives and growth in loans and acceptances, largely offset by lower deposits with central banks.

The geographic mix of our credit risk exposure remained consistent to the prior quarter. Our exposure in Canada, the U.S., Europe and Other International was 65%, 21%, 11% and 3%, respectively (January 31, 2019 – 65%, 21%, 11% and 3%, respectively).

### Net European exposure by country, asset type and client type <sup>(1) (2)</sup>

(Millions of Canadian dollars)	As at								January 31 2019
	April 30 2019								
	Asset type				Client type				
Loans Outstanding	Securities <sup>(3)</sup>	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate	Total	Total	
U.K.	\$ 8,952	\$ 16,429	\$ 397	\$ 1,814	\$ 15,269	\$ 4,084	\$ 8,239	\$ 27,592	\$ 32,787
Germany	1,667	7,515	1	350	5,014	2,651	1,868	9,533	7,886
France	932	9,267	8	349	1,386	8,229	941	10,556	11,261
<b>Total U.K., Germany, France</b>	<b>\$ 11,551</b>	<b>\$ 33,211</b>	<b>\$ 406</b>	<b>\$ 2,513</b>	<b>\$ 21,669</b>	<b>\$ 14,964</b>	<b>\$ 11,048</b>	<b>\$ 47,681</b>	<b>\$ 51,934</b>
Ireland	\$ 773	\$ 63	\$ 458	\$ 35	\$ 624	\$ 3	\$ 702	\$ 1,329	\$ 1,174
Italy	65	89	–	17	75	9	87	171	269
Portugal	–	2	9	–	10	1	–	11	44
Spain	428	203	1	39	215	–	456	671	872
<b>Total peripheral</b>	<b>\$ 1,266</b>	<b>\$ 357</b>	<b>\$ 468</b>	<b>\$ 91</b>	<b>\$ 924</b>	<b>\$ 13</b>	<b>\$ 1,245</b>	<b>\$ 2,182</b>	<b>\$ 2,359</b>
Luxembourg <sup>(4)</sup>	\$ 2,030	\$ 7,940	\$ 65	\$ 37	\$ 1,513	\$ 7,469	\$ 1,090	\$ 10,072	\$ 10,121
Netherlands <sup>(4)</sup>	617	903	52	228	894	1	905	1,800	1,852
Norway	199	1,884	–	25	1,777	95	236	2,108	2,074
Sweden	252	3,997	22	13	2,356	1,650	278	4,284	3,872
Switzerland	487	4,629	188	200	628	4,406	470	5,504	6,242
Other	1,900	1,985	133	330	1,279	1,169	1,900	4,348	3,679
<b>Total other Europe</b>	<b>\$ 5,485</b>	<b>\$ 21,338</b>	<b>\$ 460</b>	<b>\$ 833</b>	<b>\$ 8,447</b>	<b>\$ 14,790</b>	<b>\$ 4,879</b>	<b>\$ 28,116</b>	<b>\$ 27,840</b>
<b>Net exposure to Europe <sup>(5)</sup></b>	<b>\$ 18,302</b>	<b>\$ 54,906</b>	<b>\$ 1,334</b>	<b>\$ 3,437</b>	<b>\$ 31,040</b>	<b>\$ 29,767</b>	<b>\$ 17,172</b>	<b>\$ 77,979</b>	<b>\$ 82,133</b>

(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 \$134.9 billion against repo-style transactions (January 31, 2019 – \$114.8 billion) and \$9.7 billion against derivatives (January 31, 2019 – \$10.7 billion).

(3) Securities include \$13.7 billion of trading securities (January 31, 2019 – \$13.9 billion), \$24.7 billion of deposits (January 31, 2019 – \$33.7 billion), and \$16.5 billion of securities carried at FVOCI (January 31, 2019 – \$13.3 billion).

(4) Excludes \$2.1 billion (January 31, 2019 – \$1.8 billion) of exposures to supranational agencies.

(5) Reflects \$1.2 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (January 31, 2019 – \$1.5 billion).

### Q2 2019 vs. Q1 2019

Net credit risk exposure to Europe decreased \$4.2 billion from last quarter, largely driven by decreased exposure in the United Kingdom, partially offset by increased exposure in Germany.

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 \$14 million. The gross impaired loans ratio of this loan book was 16 bps, up 6 bps from last quarter.





**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				For the six months ended	
	April 30 2019		January 31 2019		April 30 2019	
	Uninsured		Uninsured		Uninsured	
	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)
<b>Region (3)</b>						
Atlantic provinces	72%	75%	74%	74%	73%	74%
Quebec	71	73	71	73	71	73
Ontario	70	68	70	67	70	68
Alberta	72	71	72	71	72	71
Saskatchewan and Manitoba	74	74	74	74	74	74
B.C. and territories	67	64	66	64	67	64
U.S.	73	n.m.	74	n.m.	74	n.m.
Other International	71	n.m.	71	n.m.	71	n.m.
Average of newly originated and acquired for the period (4), (5)	70%	68%	70%	68%	70%	68%
<b>Total Canadian Banking residential mortgages portfolio (6)</b>	<b>57%</b>	<b>50%</b>	<b>56%</b>	<b>50%</b>	<b>57%</b>	<b>50%</b>

(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

	For the three months ended			For the six months ended	
	April 30 2019	January 31 2019	April 30 2018	April 30 2019	April 30 2018
(Millions of Canadian dollars, except percentage amounts)					
Personal & Commercial Banking	\$ 385	\$ 347	\$ 306	\$ 732	\$ 618
Wealth Management	30	26	(20)	56	(22)
Capital Markets	27	143	(9)	170	16
Corporate Support and other	(1)	–	1	(1)	–
<b>PCL – Loans</b>	<b>\$ 441</b>	<b>\$ 516</b>	<b>\$ 278</b>	<b>\$ 957</b>	<b>\$ 612</b>
<b>PCL – Other financial assets</b>	<b>(15)</b>	<b>(2)</b>	<b>(4)</b>	<b>(17)</b>	<b>(4)</b>
<b>Total PCL</b>	<b>\$ 426</b>	<b>\$ 514</b>	<b>\$ 274</b>	<b>\$ 940</b>	<b>\$ 608</b>
PCL on loans is comprised of:					
Retail	\$ 30	\$ 33	\$ 26	\$ 63	\$ 46
Wholesale	(24)	60	(46)	36	(57)
<b>PCL on performing loans</b>	<b>\$ 6</b>	<b>\$ 93</b>	<b>\$ (20)</b>	<b>\$ 99</b>	<b>\$ (11)</b>
Retail	\$ 258	\$ 269	\$ 259	\$ 527	\$ 504
Wholesale	177	154	39	331	119
<b>PCL on impaired loans</b>	<b>\$ 435</b>	<b>\$ 423</b>	<b>\$ 298</b>	<b>\$ 858</b>	<b>\$ 623</b>
<b>PCL – Loans</b>	<b>\$ 441</b>	<b>\$ 516</b>	<b>\$ 278</b>	<b>\$ 957</b>	<b>\$ 612</b>
<b>PCL on loans as a % of average net loans and acceptances</b>	<b>0.29%</b>	<b>0.34%</b>	<b>0.20%</b>	<b>0.32%</b>	<b>0.22%</b>
<b>PCL on impaired loans as a % of average net loans and acceptances</b>	<b>0.29%</b>	<b>0.28%</b>	<b>0.22%</b>	<b>0.28%</b>	<b>0.23%</b>

### Additional information by geography <sup>(1)</sup>

Canada					
Residential mortgages	\$ 6	\$ 10	\$ 7	\$ 16	\$ 17
Personal	116	121	107	237	220
Credit cards	122	116	119	238	226
Small business	9	5	8	14	15
Retail	253	252	241	505	478
Wholesale	113	41	21	154	55
<b>PCL on impaired loans</b>	<b>\$ 366</b>	<b>\$ 293</b>	<b>\$ 262</b>	<b>\$ 659</b>	<b>\$ 533</b>
U.S.					
Retail	\$ 1	\$ 2	\$ 1	\$ 3	\$ 2
Wholesale	48	110	1	158	23
<b>PCL on impaired loans</b>	<b>\$ 49</b>	<b>\$ 112</b>	<b>\$ 2</b>	<b>\$ 161</b>	<b>\$ 25</b>
Other International					
Retail	\$ 4	\$ 15	\$ 17	\$ 19	\$ 24
Wholesale	16	3	17	19	41
<b>PCL on impaired loans</b>	<b>\$ 20</b>	<b>\$ 18</b>	<b>\$ 34</b>	<b>\$ 38</b>	<b>\$ 65</b>
<b>PCL on impaired loans</b>	<b>\$ 435</b>	<b>\$ 423</b>	<b>\$ 298</b>	<b>\$ 858</b>	<b>\$ 623</b>

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

### Q2 2019 vs. Q2 2018

Total PCL was \$426 million. PCL on loans of \$441 million increased \$163 million, or 59% from the prior year, due to higher provisions in Personal & Commercial Banking, Wealth Management and Capital Markets. The PCL ratio on loans of 29 bps increased 9 bps, largely from higher impaired loans in a few sectors in both Personal & Commercial Banking and Capital Markets.

PCL on performing loans of \$6 million, compared to (\$20) million in the prior year, was largely due to higher provisions in Wealth Management, partially offset by lower provisions in Personal & Commercial Banking.

PCL on impaired loans of \$435 million was \$137 million higher than the prior year, mainly due to higher provisions in Personal & Commercial Banking and Capital Markets.

PCL on loans in Personal & Commercial Banking increased \$79 million, largely reflecting an increase in provisions on impaired loans in our commercial portfolios in Canadian Banking, mainly from a couple of accounts, partially offset by lower provisions on performing loans.

PCL on loans in Wealth Management increased \$50 million. PCL on performing loans increased \$34 million from \$(21) million in the prior year due to higher repayments and maturities in the prior year in U.S. Wealth Management (including City National). Higher provisions on impaired loans in U.S. Wealth Management (including City National) and higher recoveries in the prior year also contributed to the increase.

PCL on loans in Capital Markets increased \$36 million, primarily driven by an increase in provisions on impaired loans from a few accounts.

### Q2 2019 vs. Q1 2019

PCL on loans of \$441 million decreased \$75 million, or 15% from the prior quarter, mainly due to lower provisions in Capital Markets partially offset by higher provisions in Personal & Commercial Banking. The PCL ratio on loans of 29 bps improved 5 bps.

PCL on performing loans of \$6 million, compared to \$93 million in the prior quarter, was largely due to lower provisions in both Capital Markets and Personal & Commercial Banking, mainly driven by favourable changes in macroeconomic variables compared to the prior quarter.

PCL on impaired loans of \$435 million increased \$12 million from the prior quarter, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Capital Markets.

PCL on loans in Personal & Commercial Banking increased \$38 million, largely reflecting an increase in provisions on impaired loans in commercial portfolios in Canadian Banking, mainly from a couple of accounts, partially offset by a decrease in provisions on performing loans in commercial portfolios in Canadian Banking as described above.

PCL on loans in Capital Markets decreased \$116 million, largely driven by lower provisions on performing loans as described above and higher provisions on impaired loans in the prior quarter related to one account in the utilities sector.

### Q2 2019 vs. Q2 2018 (Six months ended)

Total PCL was \$940 million. PCL on loans of \$957 million increased \$345 million, or 56% from the prior year, mainly due to higher provisions in Capital Markets, Personal & Commercial Banking and Wealth Management. The PCL ratio on loans of 32 bps increased 10 bps.

PCL on performing loans of \$99 million, compared to (\$11) million in the prior year, reflected higher provisions in Capital Markets and Wealth Management, largely driven by unfavourable changes in macroeconomic variables compared to last year.

PCL on impaired loans of \$858 million was \$235 million higher than the prior year, mainly due to higher provisions in Personal & Commercial Banking and Capital Markets.

PCL on loans in Personal & Commercial Banking increased \$114 million, largely due to an increase in provisions on impaired loans in commercial portfolios in Canadian Banking, mainly from a couple of accounts.

PCL on loans in Wealth Management increased \$78 million. PCL on performing loans increased \$56 million from \$(28) million due to higher repayments and maturities in the prior year in U.S. Wealth Management (including City National). The current year also reflected unfavourable changes in macroeconomic variables compared to last year. Higher provisions on impaired loans in U.S. Wealth Management (including City National) and higher recoveries in the prior year also contributed to the increase.

PCL on loans in Capital Markets increased \$154 million, largely driven by an increase in provisions on impaired loans from one account in the utilities sector and higher provisions on performing loans as described above.

### Gross impaired loans

(Millions of Canadian dollars, except percentage amounts)	As at		
	April 30 2019	January 31 2019	April 30 2018
Personal & Commercial Banking	\$ 1,786	\$ 1,653	\$ 1,755
Wealth Management	243	223	228
Capital Markets	1,013	906	672
Corporate Support and other	–	–	–
<b>Total GIL</b>	<b>\$ 3,042</b>	<b>\$ 2,782</b>	<b>\$ 2,655</b>
Canada <sup>(1)</sup>			
Retail	\$ 763	\$ 749	\$ 722
Wholesale	630	407	527
<b>GIL</b>	<b>1,393</b>	<b>1,156</b>	<b>1,249</b>
U.S. <sup>(1)</sup>			
Retail	\$ 31	\$ 30	\$ 37
Wholesale	969	949	497
<b>GIL</b>	<b>1,000</b>	<b>979</b>	<b>534</b>
Other International <sup>(1)</sup>			
Retail	\$ 324	\$ 331	\$ 343
Wholesale	325	316	529
<b>GIL</b>	<b>649</b>	<b>647</b>	<b>872</b>
<b>Total GIL</b>	<b>\$ 3,042</b>	<b>\$ 2,782</b>	<b>\$ 2,655</b>
Impaired loans, beginning balance	\$ 2,782	\$ 2,183	\$ 2,527
Classified as impaired during the period (new impaired) <sup>(2)</sup>	1,162	1,133	594
Net repayments <sup>(2)</sup>	(129)	(99)	(133)
Amounts written off	(501)	(377)	(346)
Other <sup>(2), (3)</sup>	(272)	(58)	13
Impaired loans, balance at end of period	\$ 3,042	\$ 2,782	\$ 2,655
<b>GIL as a % of related loans and acceptances</b>			
Total GIL as a % of related loans and acceptances	0.49%	0.46%	0.47%
Personal & Commercial Banking	0.40%	0.37%	0.41%
Canadian Banking	0.29%	0.26%	0.29%
Caribbean Banking	6.23%	6.54%	6.63%
Wealth Management	0.38%	0.37%	0.41%
Capital Markets	0.99%	0.90%	0.80%

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

**Q2 2019 vs. Q2 2018**

Total GIL of \$3,042 million increased \$387 million or 15% from the prior year, and the total GIL ratio of 49 bps increased 2 bps, primarily reflecting higher impaired loans in Capital Markets.

GIL in Personal & Commercial Banking increased \$31 million or 2%, mainly due to higher impaired loans in our Canadian Banking portfolios, partially offset by lower impaired loans in our Caribbean Banking portfolios.

GIL in Wealth Management increased \$15 million or 7%, mainly reflecting higher impaired loans in U.S. Wealth Management (including City National).

GIL in Capital Markets increased \$341 million or 51%, mainly due to one account in the utilities sector.

**Q2 2019 vs. Q1 2019**

Total GIL increased \$260 million or 9% from the prior quarter, and the total GIL ratio of 49 bps increased 3 bps.

GIL in Personal & Commercial Banking increased \$133 million or 8%, primarily in our commercial portfolios in Canadian Banking, mainly due to higher impaired loans.

GIL in Wealth Management increased \$20 million or 9%, largely reflecting higher impaired loans in U.S. Wealth Management (including City National).

GIL in Capital Markets increased \$107 million or 12%, mainly due to higher impaired loans in the oil & gas sector, partially offset by sales.

**Allowance for credit losses (ACL)**

(Millions of Canadian dollars)	As at		
	April 30 2019	January 31 2019	April 30 2018
Personal & Commercial Banking	\$ 2,692	\$ 2,604	\$ 2,478
Wealth Management	218	202	197
Capital Markets	378	464	353
Corporate Support and other	2	3	2
<b>ACL on loans</b>	<b>\$ 3,290</b>	<b>\$ 3,273</b>	<b>\$ 3,030</b>
<b>ACL on other financial assets</b>	<b>56</b>	<b>69</b>	<b>104</b>
<b>Total ACL</b>	<b>\$ 3,346</b>	<b>\$ 3,342</b>	<b>\$ 3,134</b>
ACL on loans is comprised of:			
Retail	\$ 1,818	\$ 1,785	\$ 1,678
Wholesale	677	693	564
<b>ACL on performing loans</b>	<b>\$ 2,495</b>	<b>\$ 2,478</b>	<b>\$ 2,242</b>
<b>ACL on impaired loans</b>	<b>795</b>	<b>795</b>	<b>788</b>

**Additional information by geography (1)**

Canada			
Retail	\$ 169	\$ 176	\$ 152
Wholesale	192	111	141
ACL on impaired loans	\$ 361	\$ 287	\$ 293
U.S.			
Retail	\$ –	\$ 2	\$ 2
Wholesale	141	226	137
ACL on impaired loans	\$ 141	\$ 228	\$ 139
Other International			
Retail	\$ 169	\$ 169	\$ 171
Wholesale	124	111	185
ACL on impaired loans	\$ 293	\$ 280	\$ 356
<b>ACL on impaired loans</b>	<b>\$ 795</b>	<b>\$ 795</b>	<b>\$ 788</b>

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

**Q2 2019 vs. Q2 2018**

Total ACL of \$3,346 million increased \$212 million or 7% from the prior year, reflecting an increase of \$260 million in ACL on loans, partially offset by a decrease of \$48 million in ACL on other financial assets.

ACL on performing loans of \$2,495 million increased \$253 million from the prior year, reflecting higher ACL in Personal & Commercial Banking, Capital Markets and Wealth Management, mainly driven by volume growth and unfavourable changes in macroeconomic variables compared to the prior year.

ACL on impaired loans of \$795 million increased \$7 million from the prior year, largely due to higher ACL in Personal & Commercial Banking, mainly offset by lower ACL in Capital Markets and Wealth Management.

ACL on other financial assets decreased \$48 million, primarily due to the restructuring of Barbados securities in the fourth quarter of the prior year.



**Q2 2019 vs. Q1 2019**

Total ACL of \$3,346 million remained relatively flat.

ACL on performing loans of \$2,495 million was \$17 million higher than the prior quarter, largely reflecting higher ACL on loans in Personal & Commercial Banking and Wealth Management, partially offset by lower ACL in Capital Markets.

ACL on impaired loans of \$795 million remained flat compared to the prior quarter, as higher ACL on loans in Personal & Commercial Banking, was offset by lower 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 2018 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 on our approach to the management of market risk, refer to the Market risk section of our 2018 Annual Report. There has been no material change to the SIRR measurement methodology, controls, or limits from those described in our 2018 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)	April 30, 2019				January 31, 2019		April 30, 2018	
	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	\$ 14	\$ 15	\$ 21	\$ 12	\$ 20	\$ 22	\$ 9	\$ 15
Foreign exchange	4	4	5	3	4	6	5	4
Commodities	1	1	2	1	2	3	2	1
Interest rate (1)	15	13	17	11	14	16	16	21
Credit specific (2)	5	5	6	5	5	5	5	5
Diversification (3)	(21)	(18)	n.m.	n.m.	(15)	(18)	(17)	(18)
<b>Market risk VaR</b>	<b>\$ 18</b>	<b>\$ 20</b>	<b>\$ 27</b>	<b>\$ 15</b>	<b>\$ 30</b>	<b>\$ 34</b>	<b>\$ 20</b>	<b>\$ 28</b>
<b>Market risk Stressed VaR</b>	<b>\$ 86</b>	<b>\$ 96</b>	<b>\$ 111</b>	<b>\$ 82</b>	<b>\$ 113</b>	<b>\$ 123</b>	<b>\$ 61</b>	<b>\$ 97</b>

(Millions of Canadian dollars)	April 30, 2019				April 30, 2018	
	As at	For the six months ended			As at	For the six months ended
		Average	High	Low		Average
Equity	\$ 14	\$ 18	\$ 30	\$ 12	\$ 9	\$ 15
Foreign exchange	4	5	13	3	5	3
Commodities	1	2	4	1	2	2
Interest rate (1)	15	15	19	11	16	19
Credit specific (2)	5	5	6	5	5	5
Diversification (3)	(21)	(18)	n.m.	n.m.	(17)	(18)
<b>Market risk VaR</b>	<b>\$ 18</b>	<b>\$ 27</b>	<b>\$ 45</b>	<b>\$ 15</b>	<b>\$ 20</b>	<b>\$ 26</b>
<b>Market risk Stressed VaR</b>	<b>\$ 86</b>	<b>\$ 110</b>	<b>\$ 161</b>	<b>\$ 79</b>	<b>\$ 61</b>	<b>\$ 89</b>

(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

**Q2 2019 vs. Q2 2018**

Average market risk VaR of \$20 million decreased \$8 million from the prior year due to lower relative inventory in overall fixed income portfolios and lower market volatility in the current period.

Average SVaR of \$96 million stayed stable, however the current period experienced lower variability due to reduced market volatility.

**Q2 2019 vs. Q1 2019**

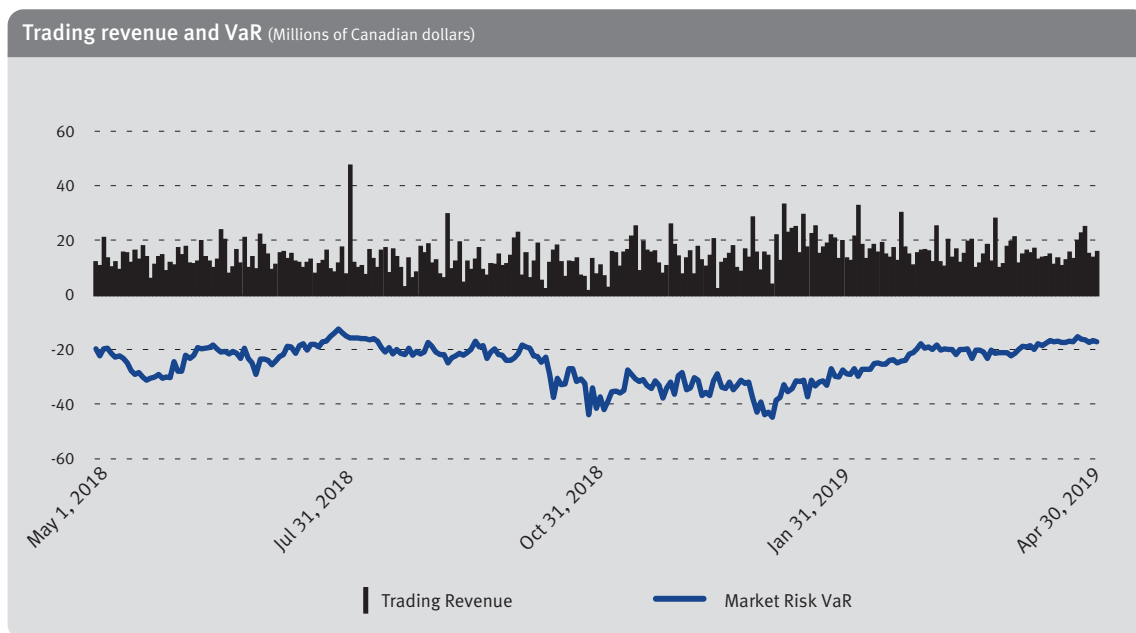
Average market risk VaR of \$20 million decreased \$14 million and average SVaR of \$96 million decreased \$27 million from the prior quarter as equity markets recovered from the volatility experienced in Q1 2019. Furthermore, inventories in overall fixed income portfolios were managed at lower levels in the current quarter.

**Q2 2019 vs. Q2 2018 (Six months ended)**

Average market risk VaR of \$27 million remained stable as the effects of more pronounced equity market volatility in Q1 2019, relative to Q2 2018, were balanced out by lower average inventory levels in overall fixed income portfolios in Q2 2019.

Average SVaR of \$110 million increased \$21 million from the prior year, mainly due to growth in Q1 from certain fixed income portfolios.

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 April 30, 2019 and January 31, 2019.

**Market risk measures for other FVTPL positions – 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 investment income within Total revenue 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 April 30, 2019, we had liabilities with respect to insurance obligations of \$11.0 billion, up from \$10.5 billion in the prior quarter, and assets of \$9.3 billion in support of the liabilities, up from \$8.6 billion last quarter.

**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.

(Millions of Canadian dollars)	April 30 2019						January 31 2019		April 30 2018	
	EVE risk			NII risk (1)			EVE risk	NII risk (1)	EVE risk	NII risk (1)
	Canadian dollar impact	U.S. dollar impact (2)	Total	Canadian dollar impact	U.S. dollar impact (2)	Total				
<b>Before-tax impact of:</b>										
100bps increase in rates	\$ (1,047)	\$ (65)	\$ (1,112)	\$ 348	\$ 121	\$ 469	\$ (1,019)	\$ 487	\$ (1,086)	\$ 555
100bps decrease in rates	909	(404)	505	(461)	(151)	(612)	549	(617)	669	(656)

(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 April 30, 2019, an immediate and sustained -100 bps shock would have had a negative impact to our NII of \$612 million, down from \$617 million last quarter. An immediate and sustained +100 bps shock at the end of April 30, 2019 would have had a negative impact to the Bank's EVE of \$1,112 million, up from \$1,019 million reported last quarter. The quarter-over-quarter NII sensitivity to the -100bps shock was stable, while the marginal increase in EVE risk is attributed to incremental fixed rate asset growth. During the second quarter of 2019, 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 \$54.9 billion of investment securities carried at FVOCI as at April 30, 2019 compared to \$51.9 billion in the prior quarter. The quarter-over-quarter increase was largely driven by higher corporate debt securities due to business activities. 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. Our portfolio of investment securities carried at FVOCI is interest rate sensitive and would impact OCI by a pre-tax change in value of \$7 million as at April 30, 2019 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 April 30, 2019 was \$7.9 billion, up from \$6.0 billion in the prior quarter. Our investment securities carried at FVOCI also include equity exposures of \$0.5 billion as at April 30, 2019 compared to \$0.5 billion last quarter.

### Derivatives related to non-trading activity

Derivatives are also used to hedge market risk exposures unrelated to our trading activity. In aggregate, derivative assets not related to trading activity of \$2.4 billion as at April 30, 2019 were down from \$2.5 billion last quarter, and derivative liabilities of \$2.2 billion as at April 30, 2019 were up from \$2.1 billion last quarter.

#### *Non-trading derivatives in hedge accounting relationships*

The derivative assets and liabilities described above include derivative assets in a designated hedge accounting relationship of \$0.9 billion as at April 30, 2019, down from \$1.0 billion as at January 31, 2019, and derivative liabilities of \$1.8 billion as at April 30, 2019, up from \$1.6 billion last quarter. These derivative assets and liabilities are included in our SIRR measure and other internal non-trading market risk measures. We use interest rate swaps to manage our investment securities and SIRR. To the extent these swaps are considered effective, changes in their fair value are recognized in Other comprehensive income. The interest rate risk for the swaps designated as cash flow hedges, measured as the change in the fair value of the derivatives for a one basis point parallel increase in yields, was \$7 million as of April 30, 2019, unchanged from \$7 million as of January 31, 2019.

Interest rate swaps are also used to hedge changes in the fair value of certain fixed-rate instruments. Changes in fair value of the hedged instruments that are related to interest rate movements and the corresponding interest rate swaps are reflected in the Consolidated Statements of Income.

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. Changes in the fair value of these hedges and the cumulative translation adjustment related to our structural foreign exchange risk are reported in Other comprehensive income.

#### *Other non-trading derivatives*

The derivative assets and liabilities related to non-trading activity also include interest rate swaps and foreign exchange derivatives that are not in designated hedge accounting relationships, which are used to manage other non-trading exposures. Changes in the fair value of these derivatives are reflected in the Consolidated Statements of Income. Derivative assets of \$1.5 billion as at April 30, 2019 were unchanged from \$1.5 billion as at January 31, 2019, and derivative liabilities of \$0.4 billion as at April 30, 2019 were down from \$0.5 billion last 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 average value of the 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 income 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.

**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 April 30, 2019			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
<b>Assets subject to market risk</b>				
Cash and due from banks	\$ 33,041	\$ —	\$ 33,041	Interest rate
Interest-bearing deposits with banks	26,718	12,865	13,853	Interest rate
Securities				
Trading	138,916	129,593	9,323	Interest rate, credit spread
Investment, net of applicable allowance	102,075	—	102,075	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	309,520	239,657	69,863	Interest rate
Loans				
Retail	407,222	7,770	399,452	Interest rate
Wholesale	198,263	9,236	189,027	Interest rate
Allowance for loan losses	(3,093)	—	(3,093)	Interest rate
Segregated fund net assets	1,561	—	1,561	Interest rate
Other				
Derivatives	84,812	82,402	2,410	Interest rate, foreign exchange
Other assets	73,905	2,892	71,013	Interest rate
<b>Assets not subject to market risk (3)</b>	<b>5,936</b>			
<b>Total assets</b>	<b>\$ 1,378,876</b>	<b>\$ 484,415</b>	<b>\$ 888,525</b>	
<b>Liabilities subject to market risk</b>				
Deposits	\$ 864,101	\$ 93,813	\$ 770,288	Interest rate
Segregated fund liabilities	1,561	—	1,561	Interest rate
Other				
Obligations related to securities sold short	34,049	34,049	—	
Obligations related to assets sold under repurchase agreements and securities loaned	223,980	218,288	5,692	Interest rate
Derivatives	82,168	79,957	2,211	Interest rate, foreign exchange
Other liabilities	76,895	8,814	68,081	Interest rate
Subordinated debentures	9,360	—	9,360	Interest rate
<b>Liabilities not subject to market risk (4)</b>	<b>4,816</b>			
<b>Total liabilities</b>	<b>\$ 1,296,930</b>	<b>\$ 434,921</b>	<b>\$ 857,193</b>	
<b>Total equity</b>	<b>\$ 81,946</b>			
<b>Total liabilities and equity</b>	<b>\$ 1,378,876</b>			

(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 \$5,936 million of physical and other assets.

(4) Liabilities not subject to market risk include \$4,816 million of payroll related and other liabilities.

(Millions of Canadian dollars)	As at January 31, 2019			
	Balance sheet amount	Market risk measure		Non-traded risk primary risk sensitivity
		Traded risk (1)	Non-traded risk (2)	
<b>Assets subject to market risk</b>				
Cash and due from banks	\$ 40,033	\$ –	\$ 40,033	Interest rate
Interest-bearing deposits with banks	38,653	22,859	15,794	Interest rate
Securities				
Trading	138,173	129,595	8,578	Interest rate, credit spread
Investment, net of applicable allowance	97,659	–	97,659	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed	297,660	223,953	73,707	Interest rate
Loans				
Retail	401,767	7,112	394,655	Interest rate
Wholesale	191,114	8,778	182,336	Interest rate
Allowance for loan losses	(3,061)	–	(3,061)	Interest rate
Segregated fund net assets	1,443	–	1,443	Interest rate
Other				
Derivatives	84,816	82,307	2,509	Interest rate, foreign exchange
Other assets	71,692	2,439	69,253	Interest rate
<b>Assets not subject to market risk (3)</b>	6,258			
<b>Total assets</b>	<b>\$ 1,366,207</b>	<b>\$ 477,043</b>	<b>\$ 882,906</b>	
<b>Liabilities subject to market risk</b>				
Deposits	\$ 852,564	\$ 96,229	\$ 756,335	Interest rate
Segregated fund liabilities	1,443	–	1,443	Interest rate
Other				
Obligations related to securities sold short	33,242	33,242	–	
Obligations related to assets sold under repurchase agreements and securities loaned	224,529	218,297	6,232	Interest rate
Derivatives	81,766	79,647	2,119	Interest rate, foreign exchange
Other liabilities	78,383	7,887	70,496	Interest rate
Subordinated debentures	9,255	–	9,255	Interest rate
<b>Liabilities not subject to market risk (4)</b>	4,375			
<b>Total liabilities</b>	<b>\$ 1,285,557</b>	<b>\$ 435,302</b>	<b>\$ 845,880</b>	
<b>Total equity</b>	<b>\$ 80,650</b>			
<b>Total liabilities and equity</b>	<b>\$ 1,366,207</b>			

(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 \$6,258 million of physical and other assets.

(4) Liabilities not subject to market risk include \$4,375 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 2018 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.

### 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 April 30, 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	\$ 33,041	\$ –	\$ 33,041	\$ 2,758	\$ 30,283
Interest-bearing deposits with banks	26,718	–	26,718	335	26,383
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	193,628	291,472	485,100	329,956	155,144
Other securities	89,309	129,715	219,024	97,427	121,597
Undrawn credit lines granted by central banks (2)	11,217	–	11,217	–	11,217
Other assets eligible as collateral for discount (3)	102,507	–	102,507	–	102,507
Other liquid assets (4)	19,466	–	19,466	19,072	394
<b>Total liquid assets</b>	<b>\$ 475,886</b>	<b>\$ 421,187</b>	<b>\$ 897,073</b>	<b>\$ 449,548</b>	<b>\$ 447,525</b>

	As at January 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	\$ 40,033	\$ –	\$ 40,033	\$ 2,585	\$ 37,448
Interest-bearing deposits with banks	38,653	–	38,653	328	38,325
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	196,493	277,661	474,154	329,626	144,528
Other securities	79,484	120,017	199,501	84,522	114,979
Undrawn credit lines granted by central banks (2)	10,722	–	10,722	–	10,722
Other assets eligible as collateral for discount (3)	95,157	–	95,157	–	95,157
Other liquid assets (4)	18,498	–	18,498	18,137	361
<b>Total liquid assets</b>	<b>\$ 479,040</b>	<b>\$ 397,678</b>	<b>\$ 876,718</b>	<b>\$ 435,198</b>	<b>\$ 441,520</b>

	As at	
	April 30 2019	January 31 2019
(Millions of Canadian dollars)		
Royal Bank of Canada	\$ 215,759	\$ 201,440
Foreign branches	73,112	81,969
Subsidiaries	158,654	158,111
<b>Total unencumbered liquid assets</b>	<b>\$ 447,525</b>	<b>\$ 441,520</b>

- (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 Bank of Canada (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.

## Q2 2019 vs. Q1 2019

Total liquid assets increased \$20 billion or 2%, primarily due to an increase in securities received as collateral under collateral swap transactions and an increase in Other assets eligible as collateral for discount resulting from volume growth in wholesale loans and residential mortgages eligible to pledge to the ELA and FHLB. These factors were partially offset by a decrease in cash and deposits with central banks reflecting cash management. However, the increase in collateral received was offset with a corresponding increase in collateral pledged under encumbered liquid assets due to collateral swap transactions.

## Asset encumbrance

The table below provides a summary of 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 April 30, 2019, our Unencumbered assets available as collateral comprised 28% of total assets (January 31, 2019 – 29%).

## Asset encumbrance

(Millions of Canadian dollars)	As at									
	April 30 2019					January 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	\$ –	\$ 2,758	\$ 30,283	\$ –	\$ 33,041	\$ –	\$ 2,585	\$ 37,448	\$ –	\$ 40,033
Interest-bearing deposits with banks	–	335	26,383	–	26,718	–	328	38,325	–	38,653
Securities										
Trading	42,029	–	94,404	2,483	138,916	40,659	–	94,912	2,602	138,173
Investment, net of applicable allowance	15,169	–	86,843	63	102,075	14,047	–	83,550	62	97,659
Assets purchased under reverse repurchase agreements and securities borrowed (4)	390,172	22,357	42,917	7,334	462,780	379,112	22,633	35,373	9,041	446,159
Loans										
Retail										
Mortgage securities	30,512	–	37,203	–	67,715	30,494	–	37,069	–	67,563
Mortgage loans	41,021	–	17,284	164,116	222,421	44,961	–	14,400	159,388	218,749
Non-mortgage loans	7,351	–	62,032	47,703	117,086	9,251	–	58,701	47,503	115,455
Wholesale	–	–	34,994	163,269	198,263	–	–	33,302	157,812	191,114
Allowance for loan losses	–	–	–	(3,093)	(3,093)	–	–	–	(3,061)	(3,061)
Segregated fund net assets	–	–	–	1,561	1,561	–	–	–	1,443	1,443
Other										
Derivatives	–	–	–	84,812	84,812	–	–	–	84,816	84,816
Others (5)	19,072	–	394	60,375	79,841	18,137	–	361	59,452	77,950
<b>Total assets</b>	<b>\$ 545,326</b>	<b>\$ 25,450</b>	<b>\$ 432,737</b>	<b>\$ 528,623</b>	<b>\$ 1,532,136</b>	<b>\$ 536,661</b>	<b>\$ 25,546</b>	<b>\$ 433,441</b>	<b>\$ 519,058</b>	<b>\$ 1,514,706</b>

(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 \$22.4 billion (January 31, 2019 – \$22.6 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 April 30, 2019, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were \$571 billion or 51% of our total funding (January 31, 2019 – \$551 billion or 49%). 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 April 30, 2019, the notional value of issued and outstanding long-term debt subject to conversion under the Bail-in regime was \$8,533 million (January 31, 2019 – \$6,115 million).

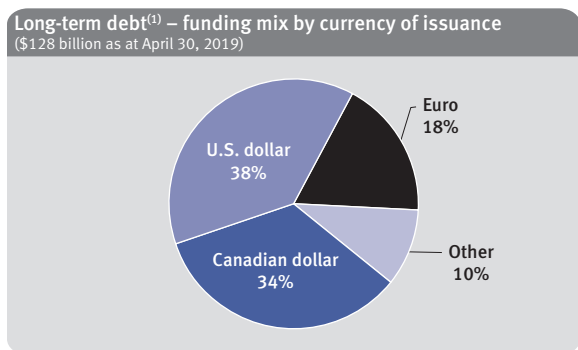
For further details on our wholesale funding, refer to the Composition of wholesale funding tables below.

*Long-term debt issuance*

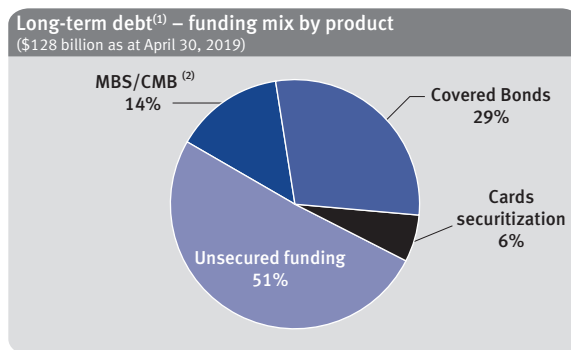
Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and take appropriate and timely actions. We operate longer-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
<ul style="list-style-type: none"> <li>Canadian Shelf Program – \$25 billion</li> </ul>	<ul style="list-style-type: none"> <li>U.S. Shelf Program – US\$40 billion</li> </ul>	<ul style="list-style-type: none"> <li>European Debt Issuance Program – US\$40 billion</li> <li>Global Covered Bond Program – €32 billion</li> <li>Japanese Issuance Programs – ¥1 trillion</li> </ul>

We also raise long-term funding using Canadian Deposit 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 <sup>(1)</sup>

(Millions of Canadian dollars)	As at April 30, 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 <sup>(2)</sup>	\$ 6,925	\$ 569	\$ 188	\$ 60	\$ 7,742	\$ –	\$ –	\$ 7,742
Certificates of deposit and commercial paper	5,906	11,110	16,878	19,719	53,613	–	134	53,747
Asset-backed commercial paper <sup>(3)</sup>	2,081	4,660	5,056	4,176	15,973	–	–	15,973
Senior unsecured medium-term notes <sup>(4)</sup>	1,375	4,043	2,865	11,113	19,396	26,363	24,165	69,924
Senior unsecured structured notes <sup>(5)</sup>	94	327	446	1,640	2,507	2,382	4,668	9,557
Mortgage securitization	–	514	587	2,317	3,418	2,119	11,928	17,465
Covered bonds/asset-backed securities <sup>(6)</sup>	–	1,503	3,991	6,353	11,847	11,773	21,402	45,022
Subordinated liabilities	–	1,000	102	2,000	3,102	2,500	3,847	9,449
Other <sup>(7)</sup>	9,796	3,310	1,221	803	15,130	156	9,968	25,254
<b>Total</b>	<b>\$ 26,177</b>	<b>\$ 27,036</b>	<b>\$ 31,334</b>	<b>\$ 48,181</b>	<b>\$ 132,728</b>	<b>\$ 45,293</b>	<b>\$ 76,112</b>	<b>\$ 254,133</b>
Of which:								
– Secured	\$ 10,777	\$ 8,353	\$ 10,706	\$ 12,846	\$ 42,682	\$ 13,892	\$ 33,331	\$ 89,905
– Unsecured	15,400	18,683	20,628	35,335	90,046	31,401	42,781	164,228

(Millions of Canadian dollars)	As at January 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 <sup>(2)</sup>	\$ 4,141	\$ 29	\$ 709	\$ –	\$ 4,879	\$ –	\$ –	\$ 4,879
Certificates of deposit and commercial paper	5,461	16,769	16,232	15,804	54,266	66	131	54,463
Asset-backed commercial paper <sup>(3)</sup>	2,029	3,160	6,183	4,702	16,074	–	–	16,074
Senior unsecured medium-term notes <sup>(4)</sup>	121	7,400	6,180	4,282	17,983	25,540	31,213	74,736
Senior unsecured structured notes <sup>(5)</sup>	65	275	450	1,759	2,549	1,511	5,514	9,574
Mortgage securitization	–	527	513	1,109	2,149	3,660	11,597	17,406
Covered bonds/asset-backed securities <sup>(6)</sup>	1,313	3,338	1,503	3,932	10,086	12,167	26,836	49,089
Subordinated liabilities	–	–	1,000	2,095	3,095	2,499	3,798	9,392
Other <sup>(7)</sup>	9,373	2,810	3,189	1,855	17,227	157	9,065	26,449
<b>Total</b>	<b>\$ 22,503</b>	<b>\$ 34,308</b>	<b>\$ 35,959</b>	<b>\$ 35,538</b>	<b>\$ 128,308</b>	<b>\$ 45,600</b>	<b>\$ 88,154</b>	<b>\$ 262,062</b>
Of which:								
– Secured	\$ 11,764	\$ 8,945	\$ 10,169	\$ 10,794	\$ 41,672	\$ 15,827	\$ 38,433	\$ 95,932
– Unsecured	10,739	25,363	25,790	24,744	86,636	29,773	49,721	166,130

(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 \$8,094 million (January 31, 2019 – \$8,240 million), bearer deposit notes (unsecured) of \$3,999 million (January 31, 2019 – \$4,176 million), other long-term structured deposits (unsecured) of \$9,811 million (January 31, 2019 – \$8,910 million), and FHLB advances (secured) of \$3,350 million (January 31, 2019 – \$5,123 million).

### 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.

There have been no changes to our major credit ratings as disclosed in our 2018 Annual Report.

### Credit ratings <sup>(1)</sup>

	As at May 22, 2019			
	Short-term debt	Legacy senior long-term debt <sup>(2)</sup>	Senior long-term debt <sup>(3)</sup>	Outlook
Moody's	P-1	Aa2	A2	stable
Standard & Poor's	A-1+	AA-	A	stable
Fitch Ratings	F1+	AA	AA	stable
DBRS	R-1(high)	AA	AA (low)	positive

(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.

### 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 of positions with collateralized counterparties moving from a negative to a positive position. 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					
	April 30 2019			January 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	\$ 211	\$ 70	\$ 181	\$ 179	\$ 63	\$ 150
Other contractual funding or margin requirements (1)	187	179	–	185	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)

(Millions of Canadian dollars, except percentage amounts)	For the three months ended			
	April 30 2019		January 31 2019	
	Total unweighted value (average) (2)	Total weighted value (average)	Total unweighted value (average) (2)	Total weighted value (average)
<b>High-quality liquid assets</b>				
Total high-quality liquid assets (HQLA)	n.a.	\$ 224,088	n.a.	\$ 221,751
<b>Cash outflows</b>				
Retail deposits and deposits from small business customers, of which:	\$ 258,262	19,749	\$ 257,222	19,754
<i>Stable deposits</i> (3)	86,823	2,605	85,262	2,558
<i>Less stable deposits</i>	171,439	17,144	171,960	17,196
Unsecured wholesale funding, of which:	294,733	137,808	291,119	132,359
<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i> (4)	125,681	29,919	127,648	30,410
<i>Non-operational deposits</i>	142,231	81,068	141,227	79,705
<i>Unsecured debt</i>	26,821	26,821	22,244	22,244
Secured wholesale funding	n.a.	35,654	n.a.	33,728
Additional requirements, of which:	268,282	83,091	269,708	80,563
<i>Outflows related to derivative exposures and other collateral requirements</i>	63,802	44,671	64,633	44,379
<i>Outflows related to loss of funding on debt products</i>	6,884	6,884	4,532	4,532
<i>Credit and liquidity facilities</i>	197,596	31,536	200,543	31,652
Other contractual funding obligations (5)	19,547	19,547	19,966	19,966
Other contingent funding obligations (6)	431,700	7,714	427,209	7,601
<b>Total cash outflows</b>	n.a.	\$ 303,563	n.a.	\$ 293,971
<b>Cash inflows</b>				
Secured lending (e.g., reverse repos)	\$ 302,587	\$ 59,777	\$ 279,932	\$ 54,853
Inflows from fully performing exposures	13,763	9,444	13,697	9,631
Other cash inflows	57,747	57,747	56,739	56,739
<b>Total cash inflows</b>	n.a.	\$ 126,968	n.a.	\$ 121,223
		Total adjusted value		Total adjusted value
Total HQLA		\$ 224,088		\$ 221,751
Total net cash outflows		176,595		172,748
<b>Liquidity coverage ratio</b>		<b>127%</b>		<b>128%</b>

(1) The LCR is calculated in accordance with OSFI's Liquidity Adequacy Requirements (LAR) guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS. The LCR for the quarter ended April 30, 2019 is calculated as an average of 61 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 83% 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.

## Q2 2019 vs. Q1 2019

The average LCR for the quarter ended April 30, 2019 was 127%, which translates into a surplus of approximately \$47 billion, compared to 128% in the prior quarter. The LCR position was relatively consistent with the prior quarter as we continue to manage balance sheet growth and optimize our liquidity position.

## 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 2018 Annual Report.

(Millions of Canadian dollars)	As at April 30, 2019									
	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
<b>Assets</b>										
Cash and deposits with banks	\$ 57,442	\$ 3	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,314	\$ 59,759
Securities										
Trading (1)	91,020	98	–	22	13	85	64	8,010	39,604	138,916
Investment, net of applicable allowance	1,745	5,373	2,819	2,589	4,104	12,080	29,869	42,989	507	102,075
Assets purchased under reverse repurchase agreements and securities borrowed	179,752	74,419	25,129	11,132	8,921	608	–	–	9,559	309,520
Loans, net of applicable allowance	23,935	20,676	25,332	25,340	30,879	121,194	218,327	49,019	87,690	602,392
Other										
Customers' liability under acceptances	10,415	5,666	11	2	5	–	–	–	(26)	16,073
Derivatives	3,857	6,165	3,555	5,185	3,127	9,156	15,699	38,067	1	84,812
Other financial assets	25,014	1,287	611	390	75	149	264	1,814	2,226	31,830
<b>Total financial assets</b>	<b>\$ 393,180</b>	<b>\$ 113,687</b>	<b>\$ 57,457</b>	<b>\$ 44,660</b>	<b>\$ 47,124</b>	<b>\$ 143,272</b>	<b>\$ 264,223</b>	<b>\$ 139,899</b>	<b>\$ 141,875</b>	<b>\$ 1,345,377</b>
Other non-financial assets	2,080	1,352	35	1,014	333	1,503	1,482	1,468	24,232	33,499
<b>Total assets</b>	<b>\$ 395,260</b>	<b>\$ 115,039</b>	<b>\$ 57,492</b>	<b>\$ 45,674</b>	<b>\$ 47,457</b>	<b>\$ 144,775</b>	<b>\$ 265,705</b>	<b>\$ 141,367</b>	<b>\$ 166,107</b>	<b>\$ 1,378,876</b>
<b>Liabilities and equity</b>										
Deposits (2)										
Unsecured borrowing	\$ 56,402	\$ 40,044	\$ 43,148	\$ 33,069	\$ 37,624	\$ 37,183	\$ 50,801	\$ 16,205	\$ 451,183	\$ 765,659
Secured borrowing	2,689	6,277	7,458	4,043	5,420	6,827	21,373	6,432	–	60,519
Covered bonds	–	1,505	3,048	–	4,851	12,515	12,265	3,739	–	37,923
Other										
Acceptances	10,406	5,666	11	2	5	–	–	–	9	16,099
Obligations related to securities sold short	34,049	–	–	–	–	–	–	–	–	34,049
Obligations related to assets sold under repurchase agreements and securities loaned	191,135	21,020	3,928	74	49	501	–	–	7,273	223,980
Derivatives	3,968	5,859	3,842	4,412	2,476	9,118	15,247	37,242	4	82,168
Other financial liabilities	26,724	2,180	1,798	319	433	220	684	7,664	885	40,907
Subordinated debentures	–	–	102	–	–	–	321	8,937	–	9,360
<b>Total financial liabilities</b>	<b>\$ 325,373</b>	<b>\$ 82,551</b>	<b>\$ 63,335</b>	<b>\$ 41,919</b>	<b>\$ 50,858</b>	<b>\$ 66,364</b>	<b>\$ 100,691</b>	<b>\$ 80,219</b>	<b>\$ 459,354</b>	<b>\$ 1,270,664</b>
Other non-financial liabilities	1,117	944	81	3,304	285	713	765	10,600	8,457	26,266
Equity	–	–	–	–	–	–	–	–	81,946	81,946
<b>Total liabilities and equity</b>	<b>\$ 326,490</b>	<b>\$ 83,495</b>	<b>\$ 63,416</b>	<b>\$ 45,223</b>	<b>\$ 51,143</b>	<b>\$ 67,077</b>	<b>\$ 101,456</b>	<b>\$ 90,819</b>	<b>\$ 549,757</b>	<b>\$ 1,378,876</b>
<b>Off-balance sheet items</b>										
Financial guarantees	\$ 528	\$ 2,421	\$ 1,957	\$ 3,023	\$ 2,086	\$ 1,144	\$ 5,898	\$ 62	\$ 57	\$ 17,176
Lease commitments	69	136	200	195	192	716	1,561	3,044	–	6,113
Commitments to extend credit	2,460	5,004	7,629	9,382	14,389	37,045	165,072	18,321	2,608	261,910
Other credit-related commitments	842	1,170	1,130	1,425	1,539	357	669	121	101,324	108,577
Other commitments	98	–	–	–	–	–	–	–	482	580
<b>Total off-balance sheet items</b>	<b>\$ 3,997</b>	<b>\$ 8,731</b>	<b>\$ 10,916</b>	<b>\$ 14,025</b>	<b>\$ 18,206</b>	<b>\$ 39,262</b>	<b>\$ 173,200</b>	<b>\$ 21,548</b>	<b>\$ 104,471</b>	<b>\$ 394,356</b>

(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 January 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
<b>Assets</b>										
Cash and deposits with banks	\$ 76,344	\$ 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,339	\$ 78,686
Securities										
Trading (1)	96,872	19	53	-	21	50	70	7,411	33,677	138,173
Investment, net of applicable allowance	1,868	3,935	3,110	2,556	2,530	13,199	29,140	40,827	494	97,659
Assets purchased under reverse repurchase agreements and securities borrowed	179,266	64,013	21,311	10,609	13,659	610	-	-	8,192	297,660
Loans, net of applicable allowance	20,699	16,596	26,144	23,958	27,730	124,862	215,764	47,888	86,179	589,820
Other										
Customers' liability under acceptances	11,152	5,605	17	-	2	5	-	-	(31)	16,750
Derivatives	5,056	6,624	4,549	2,586	4,634	9,269	16,174	35,920	4	84,816
Other financial assets	23,621	1,139	682	60	197	117	243	1,765	2,148	29,972
<b>Total financial assets</b>	<b>\$ 414,878</b>	<b>\$ 97,934</b>	<b>\$ 55,866</b>	<b>\$ 39,769</b>	<b>\$ 48,773</b>	<b>\$ 148,112</b>	<b>\$ 261,391</b>	<b>\$ 133,811</b>	<b>\$ 133,002</b>	<b>\$ 1,333,536</b>
Other non-financial assets	2,129	1,300	416	493	627	1,142	1,291	1,402	23,871	32,671
<b>Total assets</b>	<b>\$ 417,007</b>	<b>\$ 99,234</b>	<b>\$ 56,282</b>	<b>\$ 40,262</b>	<b>\$ 49,400</b>	<b>\$ 149,254</b>	<b>\$ 262,682</b>	<b>\$ 135,213</b>	<b>\$ 156,873</b>	<b>\$ 1,366,207</b>
<b>Liabilities and equity</b>										
Deposits (2)										
Unsecured borrowing	\$ 51,080	\$ 46,688	\$ 39,785	\$ 36,807	\$ 30,939	\$ 38,178	\$ 53,336	\$ 14,950	\$ 437,877	\$ 749,640
Secured borrowing	3,608	6,400	7,080	6,053	2,659	9,648	21,529	5,961	-	62,938
Covered bonds	-	2,599	1,509	3,004	-	11,988	17,331	3,555	-	39,986
Other										
Acceptances	11,149	5,605	16	2	-	6	-	-	3	16,781
Obligations related to securities sold short	33,242	-	-	-	-	-	-	-	-	33,242
Obligations related to assets sold under repurchase agreements and securities loaned	183,875	29,749	2,892	159	-	496	-	-	7,358	224,529
Derivatives	5,450	6,902	4,535	3,041	3,811	7,960	14,816	35,244	7	81,766
Other financial liabilities	27,942	2,000	2,543	1,435	371	162	588	6,894	810	42,745
Subordinated debentures	-	-	-	102	-	-	317	8,836	-	9,255
<b>Total financial liabilities</b>	<b>\$ 316,346</b>	<b>\$ 99,943</b>	<b>\$ 58,360</b>	<b>\$ 50,603</b>	<b>\$ 37,780</b>	<b>\$ 68,438</b>	<b>\$ 107,917</b>	<b>\$ 75,440</b>	<b>\$ 446,055</b>	<b>\$ 1,260,882</b>
Other non-financial liabilities	1,156	847	191	902	1,957	643	768	10,043	8,168	24,675
Equity	-	-	-	-	-	-	-	-	80,650	80,650
<b>Total liabilities and equity</b>	<b>\$ 317,502</b>	<b>\$ 100,790</b>	<b>\$ 58,551</b>	<b>\$ 51,505</b>	<b>\$ 39,737</b>	<b>\$ 69,081</b>	<b>\$ 108,685</b>	<b>\$ 85,483</b>	<b>\$ 534,873</b>	<b>\$ 1,366,207</b>
<b>Off-balance sheet items</b>										
Financial guarantees	\$ 291	\$ 1,450	\$ 2,598	\$ 1,933	\$ 3,074	\$ 1,506	\$ 4,764	\$ 713	\$ 51	\$ 16,380
Lease commitments	66	131	200	199	191	724	1,558	2,820	-	5,889
Commitments to extend credit (3)	1,372	5,036	8,245	10,037	15,554	35,718	172,094	14,821	2,224	265,101
Other credit-related commitments	574	1,047	1,477	1,098	1,425	494	699	114	102,298	109,226
Other commitments	23	-	-	-	-	-	-	-	527	550
<b>Total off-balance sheet items (3)</b>	<b>\$ 2,326</b>	<b>\$ 7,664</b>	<b>\$ 12,520</b>	<b>\$ 13,267</b>	<b>\$ 20,244</b>	<b>\$ 38,442</b>	<b>\$ 179,115</b>	<b>\$ 18,468</b>	<b>\$ 105,100</b>	<b>\$ 397,146</b>

(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.

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

## Capital management

We continue to manage our capital in accordance with our Capital Management Framework as described in our 2018 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. For additional details on new regulatory developments that relate to our Capital Management Framework, refer to the Capital, liquidity and other regulatory developments section of this Q2 2019 Report to Shareholders.

OSFI expects Canadian banks to meet the Basel III targets for CET1, Tier 1 and Total capital ratios. Effective January 1, 2014, OSFI allowed Canadian banks to phase in the Basel III Credit Valuation Adjustment (CVA) risk capital charge over a five-year period ending December 31, 2018. As of January 1, 2019, the CVA scalars were fully phased-in for each tier of capital, resulting in all tiers of capital having the same risk-weighted assets value. In fiscal 2018, the CVA scalars were 80%, 83% and 86% for CET1, Tier 1 and Total capital, respectively.

The Financial Stability Board (FSB) has 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 designation had no further impact to the loss absorbency requirements on our CET1 ratio.

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 Capital Adequacy Requirements (CAR) guideline, and the TLAC leverage ratio, which builds on the leverage ratio described in OSFI's Leverage Requirements guideline. OSFI has provided notification requiring systemically important banks to maintain a minimum TLAC ratio of 23.25%, which includes the revised Domestic Stability Buffer (DSB) as noted below, 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 improving our TLAC ratio. We expect our TLAC ratio to improve through normal course refinancing of maturing unsecured term debt.

Effective November 1, 2018, we were required to adopt OSFI's revisions to the CAR guidelines relating to the securitization framework and the standardized approach for measuring counterparty credit risk.

For further details on regulatory developments, refer to the Capital, liquidity and other regulatory developments section of this Q2 2019 Report to Shareholders.

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 ratios and leverage	OSFI regulatory target requirements for large banks under Basel III					RBC capital and leverage ratios as at April 30, 2019	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%	11.8%	1.75%	> 9.8%
Tier 1 capital	> 6.0%	2.5%	> 8.5%	1.0%	> 9.5%	12.9%	1.75%	> 11.3%
Total capital	> 8.0%	2.5%	> 10.5%	1.0%	> 11.5%	14.8%	1.75%	> 13.3%
Leverage ratio	> 3.0%	n.a.	> 3.0%	n.a.	> 3.0%	4.3%	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) In 2018, OSFI required the public disclosure of their Pillar 2 DSB. Effective April 30, 2019, OSFI raised the level for the DSB to 1.75% of RWA from 1.5%.

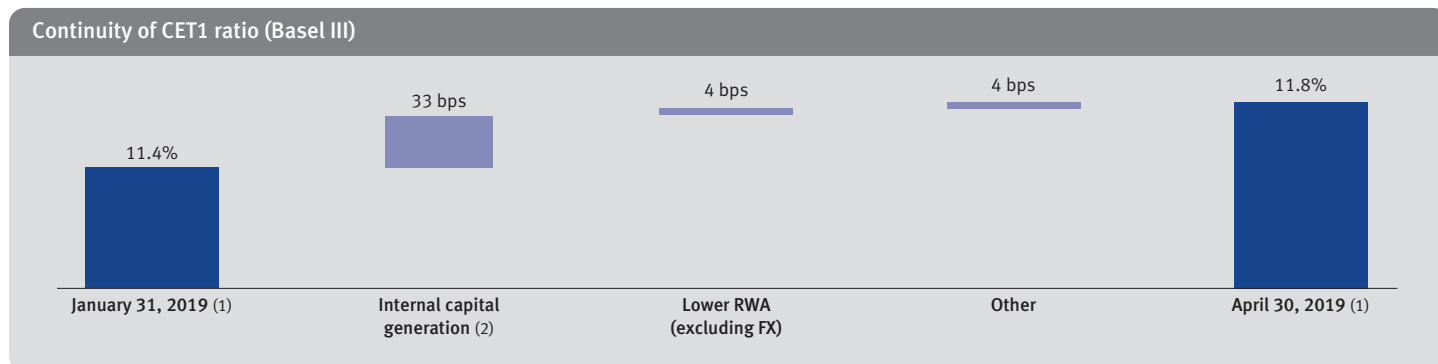
n.a. not applicable

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		
	April 30 2019	January 31 2019	October 31 2018
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)			
<b>Capital (1)</b>			
CET1 capital	\$ 60,314	\$ 57,963	\$ 57,001
Tier 1 capital	65,992	64,341	63,279
Total capital	75,491	73,758	72,494
<b>Risk-weighted Assets (RWA) used in calculation of capital ratios (1), (2)</b>			
CET1 capital RWA	\$ 510,463	\$ 508,512	\$ 495,528
Tier 1 capital RWA	510,463	508,512	495,993
Total capital RWA	510,463	508,512	496,459
Total capital RWA consisting of: (1)			
Credit risk	\$ 414,523	\$ 410,003	\$ 401,534
Market risk	31,453	34,862	32,209
Operational risk	64,487	63,647	62,716
<b>Total capital RWA</b>	<b>\$ 510,463</b>	<b>\$ 508,512</b>	<b>\$ 496,459</b>
<b>Capital ratios and Leverage ratio (1)</b>			
CET1 ratio	11.8%	11.4%	11.5%
Tier 1 capital ratio	12.9%	12.7%	12.8%
Total capital ratio	14.8%	14.5%	14.6%
Leverage ratio	4.3%	4.3%	4.4%
Leverage ratio exposure (billions)	\$ 1,521.2	\$ 1,501.8	\$ 1,450.8

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

(2) In fiscal 2018, amounts included CVA scalars of 80%, 83% and 86%, respectively.

**Q2 2019 vs. Q1 2019**

(1) Represents rounded figures.

(2) Internal capital generation of \$1.7 billion which represents Net income available to shareholders, less common and preferred shares dividends.

Our CET1 ratio was 11.8%, up 40 bps from last quarter, mainly reflecting internal capital generation and lower RWA, driven by lower market risk partially offset by growth in derivatives and lending.

Our Tier 1 capital ratio of 12.9% was up 20 bps, reflecting the factors noted above under the CET1 ratio. These factors were partially offset by the redemption of preferred shares.

Our Total capital ratio of 14.8% was up 30 bps, reflecting the factors noted above under the Tier 1 ratio.

RWA increased \$2 billion, mainly driven by the impact of foreign exchange translation and growth in derivatives and lending, partially offset by lower market risk.

Our Leverage ratio of 4.3% was flat from last quarter, as internal capital generation was offset by the redemption of preferred shares and higher leverage exposures, mainly in lending, repo-style transactions, and derivatives, partially offset by lower cash and deposits.

**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 April 30, 2019		For the six months ended April 30, 2019	
	Number of shares (000s)	Amount	Number of shares (000s)	Amount
<b>Tier 1 capital</b>				
Common shares activity				
Issued in connection with share-based compensation plans (1)	526	\$ 38	685	\$ 49
Purchased for cancellation	(107)	(1)	(3,791)	(46)
Issuance of preferred shares, Series BO (2)	–	–	14,000	350
Redemption of preferred shares, Series AD (2)	–	–	(10,000)	(250)
Redemption of preferred shares, Series AJ (2)	(13,579)	(339)	(13,579)	(339)
Redemption of preferred shares, Series AK (2)	(2,421)	(61)	(2,421)	(61)
Redemption of preferred shares, Series AL (2)	(12,000)	(300)	(12,000)	(300)

(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 9 of our Condensed Financial Statements.

On February 23, 2018, we announced a normal course issuer bid (NCIB) to purchase up to 30 million of our common shares. This NCIB was completed on February 26, 2019, with 9.7 million common shares repurchased and cancelled at a total cost of approximately \$947 million.

On February 27, 2019, we announced an NCIB program 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. Since the inception of this NCIB, the total number of common shares repurchased and cancelled was approximately 0.1 million, at a cost of approximately \$11 million.

For the three months ended April 30, 2019, the total number of common shares repurchased and cancelled under our NCIB programs was approximately 0.1 million. The total cost of the shares repurchased was \$11 million.

For the six months ended April 30, 2019, the total number of common shares repurchased and cancelled under our NCIB programs was approximately 3.8 million. The total cost of the shares repurchased was \$359 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 February 24, 2019, we redeemed all 2.4 million Non-Cumulative Floating Rate First Preferred Shares Series AK, all 13.6 million Non-Cumulative 5-Year Rate Reset First Preferred Shares Series AJ, and all 12 million Non-Cumulative 5-Year Rate Reset First Preferred Shares Series AL, at a price of \$25 per share.

## Selected share data

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at April 30, 2019		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares issued (1)	1,435,923	\$ 17,638	\$ 1.02
Treasury shares – common shares	(1,044)	(104)	
Common shares outstanding	1,434,879	\$ 17,534	
Stock options and awards			
Outstanding	8,906		
Exercisable	4,195		
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	0.25
Non-cumulative Series BB (3), (4)	20,000	500	0.24
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)	20	31	US\$ 16.88
Preferred shares issued	227,020	\$ 5,706	
Treasury shares – preferred shares (6)	(1)	–	
Preferred shares outstanding	227,019	\$ 5,706	
Dividends			
Common		\$ 1,466	
Preferred		65	

(1) For further details about our capital management activity, refer to Note 9 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) Non-viable contingent capital (NVCC) instruments.

(5) Represents 815,400 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.

As at May 17, 2019, the number of outstanding common shares was 1,435,000,145, net of treasury shares held of 954,202, and the number of stock options and awards was 8,874,869.

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 July 17, 2024, September 29, 2026, June 4, 2025, January 20, 2026 and January 27, 2026, 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 2,832 million RBC common shares, in aggregate, which would represent a dilution impact of 66.38% based on the number of RBC common shares outstanding as at April 30, 2019.

### Capital, liquidity, and other regulatory developments

#### Liquidity Adequacy Requirements (LAR) Guidelines

On April 11, 2019, OSFI issued the final LAR guidelines for LCR, Net Cumulative Cash Flow, Net Stable Funding Ratio and liquidity monitoring tools. This concluded a process of review and public consultation on items affecting the liquidity reserves banks are required to hold in order to withstand stress events, how banks can fund their balance sheets and the monitoring of related metrics. We are well positioned to comply with the final rules, and changes are not expected to have a material impact on our ability to maintain compliance with regulatory liquidity requirements and offer our breadth of retail and wholesale financial services. The revised guideline will be effective January 1, 2020.



### Net Stable Funding Ratio Disclosure

On April 11, 2019, OSFI finalized the Net Stable Funding Ratio (NSFR) Disclosure Requirements guideline. These disclosures will complement the NSFR requirements and encourage transparency, comparability, and market discipline in terms of liquidity measures. The new disclosure requirements are effective January 31, 2021.

### Large Exposure Limits Guideline

On April 10, 2019, OSFI revised its Large Exposure Limits guideline, which is intended to constrain the maximum loss an institution could face in the event of a sudden failure of a counterparty by limiting exposures to a single counterparty or interconnected group of companies. The guideline enhances existing policies for managing the risks of large exposures and ensures consistent and robust practices across all the systemically important banks in Canada. We will be required to implement the new guideline in the first quarter of 2020. We are currently assessing the impact of the guidelines.

For a discussion on risk factors resulting from these 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 2018 Annual Report and the Economic, market and regulatory review and outlook section of our Q1 2019 and of this Q2 2019 Report to Shareholders. For further details on our framework and activities to manage risks, refer to the risk and Capital management sections of our 2018 Annual Report and the Risk management and Capital management sections of this Q2 2019 Report to Shareholders.

## 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 2018 Annual Consolidated Financial Statements and our Q2 2019 Condensed Financial Statements.

### Changes in accounting policies and disclosures

#### Changes in accounting policies

During the first quarter of 2019, we adopted *IFRS 15 Revenue from Contracts with Customers* (IFRS 15). As permitted by the transition provisions of IFRS 15, we elected not to restate comparative period results; accordingly, all comparative period information prior to the first quarter of 2019 is presented in accordance with our previous accounting policies, as described in our 2018 Annual Report. As a result of the adoption of IFRS 15, we adjusted our opening retained earnings as at November 1, 2018 to align the recognition of certain fees with the transfer of the performance obligations. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

#### Future changes in accounting policies and disclosures

In January 2016, the IASB issued *IFRS 16 Leases* (IFRS 16), which sets out the principles for the recognition, measurement, presentation and disclosure of leases. The standard removes the current requirement for lessees to classify leases as finance leases or operating leases by introducing a single lessee accounting model that requires the recognition of lease assets and lease liabilities on the balance sheet for most leases. Lessees will also recognize depreciation expense on the lease asset and interest expense on the lease liability in the statement of income. There are no significant changes to lessor accounting aside from enhanced disclosure requirements.

IFRS 16 will be effective for us on November 1, 2019. We plan to adopt IFRS 16 by adjusting our Consolidated Balance Sheet at November 1, 2019, the date of initial application, with no restatement of comparative periods.

Our transition to IFRS 16 includes a centralized enterprise-wide program and governance structure led by Finance to assess our existing lease portfolio and the impact on systems, processes, training, communication and financial reporting. We are upgrading our systems, processes and internal controls. Next steps include completing a preliminary quantification of our lease assets and liabilities, the impact on the CET1 ratio and developing the additional disclosures required by the new standard.

As we prepare for our transition to IFRS 16, we will continue to monitor industry interpretations of the new standard and assess the potential impact to our implementation.

Other future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2018 Annual Consolidated Financial Statements.

## Controls and procedures

### **Disclosure controls and procedures**

As of April 30, 2019, 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 April 30, 2019.

### **Internal control over financial reporting**

No changes were made in our internal control over financial reporting during the quarter ended April 30, 2019 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 11 and 26 of our audited 2018 Annual Consolidated Financial Statements.

## EDTF recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2018 Annual Report, Q2 2019 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 Q2 2019 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	46	112	1
	2	Define risk terminology and measures		50, 52-55 213-214	–
	3	Top and emerging risks		50-51	–
	4	New regulatory ratios	40-41	91-93	–
Risk governance, risk management and business model	5	Risk management organization		50, 52-55	–
	6	Risk culture		52-55	–
	7	Risk in the context of our business activities		98	–
	8	Stress testing		53-54, 67	–
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	41	91-93	–
	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		90-93	–
	13	RWA by business segments		–	26
	14	Analysis of capital requirement, and related measurement model information		56-59	25,*
	15	RWA credit risk and related risk measurements		–	*
	16	Movement of risk-weighted assets by risk type		–	26
	17	Basel back-testing		53, 56-57	40
Liquidity	18	Quantitative and qualitative analysis of our liquidity reserve	33-34	73-75, 79-80	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	35, 37-38	75,78	–
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	39-40	80-81	–
	21	Sources of funding and funding strategy	35-37	75-77	–
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	32-33	71-72	–
	23	Decomposition of market risk factors	29-31	67-70	–
	24	Market risk validation and back-testing		67	–
	25	Primary risk management techniques beyond reported risk measures and parameters		67-70	–
Credit risk	26	Bank's credit risk profile	22-29	56-66, 159-165	29-40,*
		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	64-68	106-111	*
	27	Policies for identifying impaired loans		57-59, 101-102, 123-126, 128-129	–
	28	Reconciliation of the opening and closing balances of impaired loans and impairment allowances during the year		–	31, 36
	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		60	42
	30	Credit risk mitigation, including collateral held for all sources of credit risk		59	39
Other	31	Other risk types		83-90	–
	32	Publicly known risk events		86-87, 202-203	–

\* These disclosure requirements are satisfied or partially satisfied by disclosures provided in our Pillar 3 Report as at April 30, 2019 and October 31, 2018.

## Interim Condensed Consolidated Financial Statements (unaudited)

### Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at	
	April 30 2019	October 31 2018
<b>Assets</b>		
Cash and due from banks	\$ 33,041	\$ 30,209
Interest-bearing deposits with banks	26,718	36,471
<b>Securities</b>		
Trading	138,916	128,258
Investment, net of applicable allowance (Note 4)	102,075	94,608
	240,991	222,866
Assets purchased under reverse repurchase agreements and securities borrowed	309,520	294,602
<b>Loans</b> (Note 5)		
Retail	407,222	399,452
Wholesale	198,263	180,278
	605,485	579,730
Allowance for loan losses (Note 5)	(3,093)	(2,912)
	602,392	576,818
Segregated fund net assets	1,561	1,368
<b>Other</b>		
Customers' liability under acceptances	16,073	15,641
Derivatives	84,812	94,039
Premises and equipment	3,014	2,832
Goodwill	11,289	11,137
Other intangibles	4,758	4,687
Other assets	44,707	44,064
	164,653	172,400
<b>Total assets</b>	<b>\$ 1,378,876</b>	<b>\$ 1,334,734</b>
<b>Liabilities and equity</b>		
<b>Deposits</b> (Note 6)		
Personal	\$ 286,495	\$ 270,154
Business and government	544,667	534,371
Bank	32,939	32,521
	864,101	837,046
Segregated fund net liabilities	1,561	1,368
<b>Other</b>		
Acceptances	16,099	15,662
Obligations related to securities sold short	34,049	32,247
Obligations related to assets sold under repurchase agreements and securities loaned	223,980	206,814
Derivatives	82,168	90,238
Insurance claims and policy benefit liabilities	11,006	10,000
Other liabilities	54,606	52,273
	421,908	407,234
Subordinated debentures	9,360	9,131
<b>Total liabilities</b>	<b>1,296,930</b>	<b>1,254,779</b>
<b>Equity attributable to shareholders</b>		
Preferred shares (Note 9)	5,706	6,309
Common shares (Note 9)	17,534	17,617
Retained earnings	53,640	51,112
Other components of equity	4,965	4,823
	81,845	79,861
Non-controlling interests	101	94
<b>Total equity</b>	<b>81,946</b>	<b>79,955</b>
<b>Total liabilities and equity</b>	<b>\$ 1,378,876</b>	<b>\$ 1,334,734</b>

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		For the six months ended	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
<b>Interest and dividend income</b> (Note 3)				
Loans	\$ 6,123	\$ 5,059	\$ 12,283	\$ 10,032
Securities	1,702	1,396	3,398	2,750
Assets purchased under reverse repurchase agreements and securities borrowed	2,191	1,285	4,339	2,393
Deposits and other	116	125	261	230
	10,132	7,865	20,281	15,405
<b>Interest expense</b> (Note 3)				
Deposits and other	3,203	2,220	6,428	4,207
Other liabilities	1,999	1,148	3,947	2,182
Subordinated debentures	93	76	185	150
	5,295	3,444	10,560	6,539
<b>Net interest income</b>	4,837	4,421	9,721	8,866
<b>Non-interest income</b>				
Insurance premiums, investment and fee income	1,515	806	3,094	1,950
Trading revenue	250	236	608	554
Investment management and custodial fees	1,381	1,318	2,831	2,643
Mutual fund revenue	899	862	1,772	1,747
Securities brokerage commissions	316	334	658	689
Service charges	466	443	934	883
Underwriting and other advisory fees	554	457	899	998
Foreign exchange revenue, other than trading	243	277	492	558
Card service revenue	266	267	548	524
Credit fees	288	317	603	645
Net gains on investment securities	37	49	83	88
Share of profit in joint ventures and associates	14	14	29	39
Other	433	253	816	698
	6,662	5,633	13,367	12,016
<b>Total revenue</b>	11,499	10,054	23,088	20,882
<b>Provision for credit losses</b> (Notes 4 and 5)	426	274	940	608
<b>Insurance policyholder benefits, claims and acquisition expense</b>	1,160	421	2,385	1,257
<b>Non-interest expense</b>				
Human resources (Note 7)	3,622	3,324	7,265	6,826
Equipment	445	386	876	758
Occupancy	405	386	802	765
Communications	273	249	513	473
Professional fees	290	321	595	602
Amortization of other intangibles	299	266	589	527
Other	582	550	1,188	1,142
	5,916	5,482	11,828	11,093
<b>Income before income taxes</b>	3,997	3,877	7,935	7,924
Income taxes	767	817	1,533	1,852
<b>Net income</b>	\$ 3,230	\$ 3,060	\$ 6,402	\$ 6,072
<b>Net income attributable to:</b>				
Shareholders	\$ 3,226	\$ 3,051	\$ 6,396	\$ 6,052
Non-controlling interests	4	9	6	20
	\$ 3,230	\$ 3,060	\$ 6,402	\$ 6,072
<b>Basic earnings per share</b> (in dollars) (Note 10)	\$ 2.20	\$ 2.06	\$ 4.36	\$ 4.08
<b>Diluted earnings per share</b> (in dollars) (Note 10)	2.20	2.06	4.34	4.07
<b>Dividends per common share</b> (in dollars)	1.02	0.94	2.00	1.85

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		For the six months ended	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
<b>Net income</b>	\$ 3,230	\$ 3,060	\$ 6,402	\$ 6,072
<b>Other comprehensive income (loss), net of taxes</b>				
<b>Items that will be reclassified subsequently to income:</b>				
<b>Net change in unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income</b>				
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	140	(14)	139	(38)
Provision for credit losses recognized in income	(9)	9	(10)	24
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(31)	(35)	(60)	(63)
	100	(40)	69	(77)
<b>Foreign currency translation adjustments</b>				
Unrealized foreign currency translation gains (losses)	1,096	1,978	1,131	(28)
Net foreign currency translation gains (losses) from hedging activities	(398)	(710)	(464)	(52)
Reclassification of losses (gains) on foreign currency translation to income	–	–	2	–
Reclassification of losses (gains) on net investment hedging activities to income	–	–	2	–
	698	1,268	671	(80)
<b>Net change in cash flow hedges</b>				
Net gains (losses) on derivatives designated as cash flow hedges	(182)	(217)	(498)	207
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(25)	144	(99)	(9)
	(207)	(73)	(597)	198
<b>Items that will not be reclassified subsequently to income:</b>				
Remeasurements of employee benefit plans (Note 7)	(92)	84	(486)	133
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(189)	144	(26)	126
Net gains (losses) on equity securities designated at fair value through other comprehensive income	30	1	37	(1)
	(251)	229	(475)	258
<b>Total other comprehensive income (loss), net of taxes</b>	340	1,384	(332)	299
<b>Total comprehensive income (loss)</b>	\$ 3,570	\$ 4,444	\$ 6,070	\$ 6,371
<b>Total comprehensive income attributable to:</b>				
Shareholders	\$ 3,566	\$ 4,432	\$ 6,063	\$ 6,351
Non-controlling interests	4	12	7	20
	\$ 3,570	\$ 4,444	\$ 6,070	\$ 6,371

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		For the six months ended	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
<b>Income taxes on other comprehensive income</b>				
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	\$ 48	\$ (40)	\$ 44	\$ 2
Provision for credit losses recognized in income	–	–	–	(4)
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(15)	(15)	(32)	(30)
Unrealized foreign currency translation gains (losses)	1	5	2	–
Net foreign currency translation gains (losses) from hedging activities	(136)	(239)	(160)	(20)
Reclassification of losses (gains) on net investment hedging activities to income	–	–	1	–
Net gains (losses) on derivatives designated as cash flow hedges	(66)	(78)	(179)	105
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	(9)	52	(36)	(34)
Remeasurements of employee benefit plans	(45)	30	(170)	50
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	(69)	53	(10)	46
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(6)	(3)	(7)	(4)
<b>Total income tax expenses (recoveries)</b>	\$ (297)	\$ (235)	\$ (547)	\$ 111

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



## Interim Condensed Consolidated Statements of Changes in Equity (unaudited)

	For the three months ended April 30, 2019												
	Other components of equity												
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)													
<b>Balance at beginning of period</b>	\$ 6,406	\$ 17,601	\$ –	\$ (36)	\$ 52,208	\$ (43)	\$ 4,119	\$ 298	\$ 4,374	\$ 80,553	\$ 97	\$ 80,650	
Changes in equity													
Issues of share capital	–	38	–	–	–	–	–	–	–	38	–	38	
Common shares purchased for cancellation	–	(1)	–	–	(10)	–	–	–	–	(11)	–	(11)	
Redemption of preferred shares	(700)	–	–	–	–	–	–	–	–	(700)	–	(700)	
Sales of treasury shares	–	–	43	1,272	–	–	–	–	–	1,315	–	1,315	
Purchases of treasury shares	–	–	(43)	(1,340)	–	–	–	–	–	(1,383)	–	(1,383)	
Share-based compensation awards	–	–	–	–	(8)	–	–	–	–	(8)	–	(8)	
Dividends on common shares	–	–	–	–	(1,466)	–	–	–	–	(1,466)	–	(1,466)	
Dividends on preferred shares and other	–	–	–	–	(65)	–	–	–	–	(65)	–	(65)	
Other	–	–	–	–	6	–	–	–	–	6	–	6	
Net income	–	–	–	–	3,226	–	–	–	–	3,226	4	3,230	
Total other comprehensive income (loss), net of taxes	–	–	–	–	(251)	100	698	(207)	591	340	–	340	
<b>Balance at end of period</b>	\$ 5,706	\$ 17,638	\$ –	\$ (104)	\$ 53,640	\$ 57	\$ 4,817	\$ 91	\$ 4,965	\$ 81,845	\$ 101	\$ 81,946	

	For the three months ended April 30, 2018												
	Other components of equity												
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
(Millions of Canadian dollars)													
<b>Balance at beginning of period</b>	\$ 6,306	\$ 17,647	\$ –	\$ (7)	\$ 45,764	\$ 124	\$ 2,200	\$ 702	\$ 3,026	\$ 72,736	\$ 588	\$ 73,324	
Changes in equity													
Issues of share capital	–	15	–	–	–	–	–	–	–	15	–	15	
Common shares purchased for cancellation	–	(28)	–	–	(196)	–	–	–	–	(224)	–	(224)	
Redemption of preferred shares	–	–	–	–	–	–	–	–	–	–	–	–	
Sales of treasury shares	–	–	64	1,344	–	–	–	–	–	1,408	–	1,408	
Purchases of treasury shares	–	–	(67)	(1,432)	–	–	–	–	–	(1,499)	–	(1,499)	
Share-based compensation awards	–	–	–	–	(1)	–	–	–	–	(1)	–	(1)	
Dividends on common shares	–	–	–	–	(1,356)	–	–	–	–	(1,356)	–	(1,356)	
Dividends on preferred shares and other	–	–	–	–	(71)	–	–	–	–	(71)	(1)	(72)	
Other	–	–	–	–	(15)	–	–	–	–	(15)	1	(14)	
Net income	–	–	–	–	3,051	–	–	–	–	3,051	9	3,060	
Total other comprehensive income (loss), net of taxes	–	–	–	–	229	(40)	1,265	(73)	1,152	1,381	3	1,384	
<b>Balance at end of period</b>	\$ 6,306	\$ 17,634	\$ (3)	\$ (95)	\$ 47,405	\$ 84	\$ 3,465	\$ 629	\$ 4,178	\$ 75,425	\$ 600	\$ 76,025	

For the six months ended April 30, 2019												
	Other components of equity											
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Total equity
(Millions of Canadian dollars)												
<b>Balance at beginning of period</b>	\$ 6,306	\$ 17,635	\$ 3	\$ (18)	\$ 51,112		\$ (12)	\$ 4,147	\$ 688	\$ 4,823	\$ 79,861	\$ 79,955
Transition adjustment (Note 2)	–	–	–	–	(70)	–	–	–	–	–	(70)	(70)
<b>Adjusted balance at beginning of period</b>	\$ 6,306	\$ 17,635	\$ 3	\$ (18)	\$ 51,042		\$ (12)	\$ 4,147	\$ 688	\$ 4,823	\$ 79,791	\$ 79,885
Changes in equity												
Issues of share capital	350	49	–	–	–	–	–	–	–	–	399	399
Common shares purchased for cancellation	–	(46)	–	–	(313)	–	–	–	–	–	(359)	(359)
Redemption of preferred shares	(950)	–	–	–	–	–	–	–	–	–	(950)	(950)
Sales of treasury shares	–	–	125	2,801	–	–	–	–	–	–	2,926	2,926
Purchases of treasury shares	–	–	(128)	(2,887)	–	–	–	–	–	–	(3,015)	(3,015)
Share-based compensation awards	–	–	–	–	(6)	–	–	–	–	–	(6)	(6)
Dividends on common shares	–	–	–	–	(2,873)	–	–	–	–	–	(2,873)	(2,873)
Dividends on preferred shares and other	–	–	–	–	(139)	–	–	–	–	–	(139)	(139)
Other	–	–	–	–	8	–	–	–	–	–	8	8
Net income	–	–	–	–	6,396	–	–	–	–	–	6,396	6,402
Total other comprehensive income (loss), net of taxes	–	–	–	–	(475)	69	670	(597)	142	142	(333)	(332)
<b>Balance at end of period</b>	\$ 5,706	\$ 17,638	\$ –	\$ (104)	\$ 53,640	\$ 57	\$ 4,817	\$ 91	\$ 4,965	\$ 4,965	\$ 81,845	\$ 81,946

For the six months ended April 30, 2018												
	Other components of equity											
	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Available-for-sale securities	FVOCI securities and loans	Foreign currency translation	Cash flow hedges	Total other components of equity	Equity attributable to shareholders	Total equity
(Millions of Canadian dollars)												
<b>Balance at beginning of period</b>	\$ 6,413	\$ 17,730	\$ –	\$ (27)	\$ 45,359	\$ 378	\$ 3,545	\$ 431	\$ 4,354	\$ 4,354	\$ 73,829	\$ 74,428
Transition adjustment	–	–	–	–	(558)	(378)	299	–	–	(79)	(637)	(637)
<b>Adjusted balance at beginning of period</b>	\$ 6,413	\$ 17,730	\$ –	\$ (27)	\$ 44,801	\$ –	\$ 299	\$ 431	\$ 4,275	\$ 4,275	\$ 73,192	\$ 73,791
Changes in equity												
Issues of share capital	–	45	–	–	–	–	–	–	–	–	45	45
Common shares purchased for cancellation	–	(141)	–	–	(1,006)	–	–	–	–	–	(1,147)	(1,147)
Redemption of preferred shares	(107)	–	–	–	2	–	–	–	–	–	(105)	(105)
Sales of treasury shares	–	–	133	2,769	–	–	–	–	–	–	2,902	2,902
Purchases of treasury shares	–	–	(136)	(2,837)	–	–	–	–	–	–	(2,973)	(2,973)
Share-based compensation awards	–	–	–	–	(4)	–	–	–	–	–	(4)	(4)
Dividends on common shares	–	–	–	–	(2,675)	–	–	–	–	–	(2,675)	(2,675)
Dividends on preferred shares and other	–	–	–	–	(143)	–	–	–	–	–	(143)	(162)
Other	–	–	–	–	120	(138)	–	–	–	(138)	(18)	(18)
Net income	–	–	–	–	6,052	–	–	–	–	–	6,052	6,072
Total other comprehensive income (loss), net of taxes	–	–	–	–	258	(77)	(80)	198	41	41	299	299
<b>Balance at end of period</b>	\$ 6,306	\$ 17,634	\$ (3)	\$ (95)	\$ 47,405	\$ 84	\$ 3,465	\$ 629	\$ 4,178	\$ 4,178	\$ 75,425	\$ 76,025

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		For the six months ended	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
<b>Cash flows from operating activities</b>				
Net income	\$ 3,230	\$ 3,060	\$ 6,402	\$ 6,072
Adjustments for non-cash items and others				
Provision for credit losses	426	274	940	608
Depreciation	157	141	307	276
Deferred income taxes	(124)	42	(286)	313
Amortization and impairment of other intangibles	300	266	593	527
Net changes in investments in joint ventures and associates	(13)	(13)	(28)	(35)
Losses (Gains) on investment securities	(47)	(51)	(96)	(94)
Adjustments for net changes in operating assets and liabilities				
Insurance claims and policy benefit liabilities	494	(214)	1,006	(19)
Net change in accrued interest receivable and payable	28	76	114	(56)
Current income taxes	(376)	(541)	(535)	(2,511)
Derivative assets	4	11,337	9,227	848
Derivative liabilities	402	(13,329)	(8,070)	(1,237)
Trading securities	(743)	(1,807)	(10,658)	(613)
Loans, net of securitizations	(12,604)	(14,695)	(25,755)	(18,274)
Assets purchased under reverse repurchase agreements and securities borrowed	(11,860)	(1,419)	(14,918)	(40,208)
Deposits, net of securitizations	11,537	23,337	27,055	33,751
Obligations related to assets sold under repurchase agreements and securities loaned	(549)	(12,401)	17,166	27,834
Obligations related to securities sold short	807	2,643	1,802	3,039
Brokers and dealers receivable and payable	162	(778)	(316)	(944)
Other	(2,405)	(2,469)	(3,897)	(1,244)
<b>Net cash from (used in) operating activities</b>	<b>(11,174)</b>	<b>(6,541)</b>	<b>53</b>	<b>8,033</b>
<b>Cash flows from investing activities</b>				
Change in interest-bearing deposits with banks	11,935	290	9,753	(4,317)
Proceeds from sale of investment securities	5,571	5,280	8,856	10,497
Proceeds from maturity of investment securities	7,279	11,753	22,298	18,885
Purchases of investment securities	(16,218)	(11,310)	(36,886)	(24,652)
Net acquisitions of premises and equipment and other intangibles	(575)	(517)	(1,136)	(874)
<b>Net cash from (used in) investing activities</b>	<b>7,992</b>	<b>5,496</b>	<b>2,885</b>	<b>(461)</b>
<b>Cash flows from financing activities</b>				
Issue of common shares, net of issuance costs	30	9	39	32
Common shares purchased for cancellation	(11)	(224)	(359)	(1,147)
Issue of preferred shares, net of issuance costs	–	–	350	–
Redemption of preferred shares	(700)	–	(950)	(105)
Sales of treasury shares	1,315	1,408	2,926	2,902
Purchases of treasury shares	(1,383)	(1,499)	(3,015)	(2,973)
Dividends paid	(1,481)	(1,391)	(2,964)	(2,787)
Dividends/distributions paid to non-controlling interests	–	(1)	–	(19)
Change in short-term borrowings of subsidiaries	(1,774)	899	3,086	898
<b>Net cash from (used in) financing activities</b>	<b>(4,004)</b>	<b>(799)</b>	<b>(887)</b>	<b>(3,199)</b>
Effect of exchange rate changes on cash and due from banks	194	121	781	(15)
<b>Net change in cash and due from banks</b>	<b>(6,992)</b>	<b>(1,723)</b>	<b>2,832</b>	<b>4,358</b>
Cash and due from banks at beginning of period (1)	40,033	34,488	30,209	28,407
<b>Cash and due from banks at end of period (1)</b>	<b>\$ 33,041</b>	<b>\$ 32,765</b>	<b>\$ 33,041</b>	<b>\$ 32,765</b>
<b>Cash flows from operating activities include:</b>				
Amount of interest paid	\$ 5,047	\$ 3,005	\$ 9,795	\$ 6,006
Amount of interest received	9,817	7,434	19,477	14,689
Amount of dividends received	488	429	981	839
Amount of income taxes paid	958	1,050	1,749	4,168

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were \$2.3 billion as at April 30, 2019 (January 31, 2019 – \$2.3 billion; October 31, 2018 – \$2.4 billion; April 30, 2018 – \$2.6 billion; January 31, 2018 – \$2.5 billion; October 31, 2017 – \$2.3 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 2018 Annual Consolidated Financial Statements and the accompanying notes included on pages 113 to 211 in our 2018 Annual Report. Tabular information is stated in millions of Canadian dollars, except per share amounts and percentages. On May 22, 2019, 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 2018 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 2018 Annual Consolidated Financial Statements.

**Changes in accounting policies**

During the first quarter, we adopted IFRS 15 *Revenue from Contracts with Customers* (IFRS 15). As permitted by the transition provisions of IFRS 15, we elected not to restate comparative period results; accordingly, all comparative period information is presented in accordance with our previous accounting policies, as described in our 2018 Annual Report. As a result of the adoption of IFRS 15, we reduced our opening retained earnings by \$70 million, on an after tax basis as at November 1, 2018 (the date of initial application), to align the recognition of certain fees with the transfer of the performance obligations.

**Commissions and fees**

Commissions and fees primarily relate to Investment management and custodial fees, Mutual fund revenue, Securities brokerage commissions, Services charges, Underwriting and other advisory fees, Card service revenue and Credit fees, and are recognized based on the applicable service contracts with customers.

Investment management and custodial fees and Mutual fund revenue are generally calculated as a percentage of daily or period-end net asset values based on the terms of the contract with customers and are received monthly, quarterly, semi-annually or annually, depending on the terms of the contract. Investment management and custodial fees are generally derived from assets under management (AUM) when our clients solicit the investment capabilities of an investment manager or from assets under administration (AUA) where the investment strategy is directed by the client or a designated third party manager. Mutual fund revenue is derived from the daily net asset value (NAV) of the mutual funds. Investment management and custodial fees and Mutual fund revenue are recognized over time when the service is provided to the customer provided that it is highly probable that a significant reversal in the amount of revenue recognized will not occur.

Commissions earned on Securities brokerage services and Service charges that are related to the provision of specific transaction type services are recognized when the service is fulfilled. Where services are provided over time, revenue is recognized as the services are provided.

Underwriting and other advisory fees primarily relate to underwriting of new issuances of debt or equity and various advisory services. Underwriting fees are generally expressed as a percentage of the funds raised through issuance and are recognized when the service has been completed. Advisory fees vary depending on the scope and type of engagement and can be fixed in nature or contingent on a future event. Advisory fees are recognized over the period in which the service is provided and are recognized only to the extent that it is highly probable that a significant reversal in the amount of revenue will not occur.

Card service revenue primarily includes interchange revenue and annual card fees. Interchange revenue is calculated as a fixed percentage of the transaction amount and recognized when the card transaction is settled. Annual card fees are fixed fees and are recognized over a twelve month period.

Credit fees are primarily earned for arranging syndicated loans and making credit available on undrawn facilities. The timing of the recognition of credit fees varies based on the nature of the services provided.

When service fees and other costs are incurred in relation to commissions and fees earned, we record these costs on a gross basis in either Non-interest expense – Other or Non-interest expense – Human resources based on our assessment of whether we have primary responsibility to fulfill the contract with the customer and have discretion in establishing the price for the commissions and fees earned, which may require judgment.

**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 2018 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.

(Millions of Canadian dollars)	As at April 30, 2019							
	Carrying value and fair value				Carrying value		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	Total carrying amount	Total fair value
<b>Financial assets</b>								
Interest-bearing deposits with banks	\$ -	\$ 12,861	\$ -	\$ -	\$ 13,857	\$ 13,857	\$ 26,718	\$ 26,718
Securities								
Trading	130,612	8,304	-	-	-	-	138,916	138,916
Investment, net of applicable allowance	-	-	54,397	537	47,141	47,131	102,075	102,065
	130,612	8,304	54,397	537	47,141	47,131	240,991	240,981
Assets purchased under reverse repurchase agreements and securities borrowed	239,657	-	-	-	69,863	69,865	309,520	309,522
Loans, net of applicable allowance								
Retail	135	195	96	-	404,748	405,181	405,174	405,607
Wholesale	7,271	1,746	477	-	187,724	186,967	197,218	196,461
	7,406	1,941	573	-	592,472	592,148	602,392	602,068
Other								
Derivatives	84,812	-	-	-	-	-	84,812	84,812
Other assets (1)	1,458	-	-	-	46,445	46,445	47,903	47,903
<b>Financial liabilities</b>								
Deposits								
Personal	\$ 152	\$ 15,880			\$ 270,463	\$ 270,325	\$ 286,495	\$ 286,357
Business and government (2)	(18)	109,592			435,093	435,936	544,667	545,510
Bank (3)	-	4,601			28,338	28,379	32,939	32,980
	134	130,073			733,894	734,640	864,101	864,847
Other								
Obligations related to securities sold short	34,049	-			-	-	34,049	34,049
Obligations related to assets sold under repurchase agreements and securities loaned	-	218,288			5,692	5,693	223,980	223,981
Derivatives	82,168	-			-	-	82,168	82,168
Other liabilities (4)	(1,159)	33			58,132	58,103	57,006	56,977
Subordinated debentures	-	-			9,360	9,524	9,360	9,524

(Millions of Canadian dollars)	As at October 31, 2018							
	Carrying value and fair value				Carrying value		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	Total carrying amount	Total fair value
<b>Financial assets</b>								
Interest-bearing deposits with banks	\$ –	\$ 20,274	\$ –	\$ –	\$ 16,197	\$ 16,197	\$ 36,471	\$ 36,471
<b>Securities</b>								
Trading	121,031	7,227	–	–	–	–	128,258	128,258
Investment, net of applicable allowance	–	–	48,093	406	46,109	45,367	94,608	93,866
	121,031	7,227	48,093	406	46,109	45,367	222,866	222,124
<b>Assets purchased under reverse repurchase agreements and securities borrowed</b>								
	219,108	–	–	–	75,494	75,490	294,602	294,598
<b>Loans, net of applicable allowance</b>								
Retail	69	190	94	–	397,102	394,051	397,455	394,404
Wholesale	7,129	1,540	458	–	170,236	168,087	179,363	177,214
	7,198	1,730	552	–	567,338	562,138	576,818	571,618
<b>Other</b>								
Derivatives	94,039	–	–	–	–	–	94,039	94,039
Other assets (1)	1,373	–	–	–	46,205	46,205	47,578	47,578
<b>Financial liabilities</b>								
<b>Deposits</b>								
Personal	\$ 150	\$ 14,602			\$ 255,402	\$ 255,115	\$ 270,154	\$ 269,867
Business and government (2)	(11)	103,446			430,936	431,158	534,371	534,593
Bank (3)	–	7,072			25,449	25,462	32,521	32,534
	139	125,120			711,787	711,735	837,046	836,994
<b>Other</b>								
Obligations related to securities sold short	32,247	–			–	–	32,247	32,247
Obligations related to assets sold under repurchase agreements and securities loaned	–	201,839			4,975	4,976	206,814	206,815
Derivatives	90,238	–			–	–	90,238	90,238
Other liabilities (4)	(1,434)	18			54,917	54,880	53,501	53,464
Subordinated debentures	–	–			9,131	9,319	9,131	9,319

- (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									
	April 30, 2019					October 31, 2018				
	Fair value measurements using			Netting adjustments	Fair value	Fair value measurements using			Netting adjustments	Fair value
Level 1	Level 2	Level 3	Level 1			Level 2	Level 3			
<b>Financial assets</b>										
<b>Interest-bearing deposits with banks</b>	\$ –	\$ 12,861	\$ –	\$ –	\$ 12,861	\$ –	\$ 20,274	\$ –	\$ –	\$ 20,274
<b>Securities</b>										
<b>Trading</b>										
Issued or guaranteed										
Canadian government debt (1)										
Federal	12,161	5,219	–	–	17,380	8,342	6,231	–	–	14,573
Provincial and municipal	–	11,291	–	–	11,291	–	11,350	–	–	11,350
U.S. state, municipal and agencies debt (1)	962	35,523	67	–	36,552	2,068	31,030	66	–	33,164
Other OECD government debt (2)	4,285	5,018	–	–	9,303	1,151	9,018	–	–	10,169
Mortgage-backed securities (1)	–	967	–	–	967	–	1,001	–	–	1,001
Asset-backed securities										
Non-CDO securities (3)	–	963	4	–	967	–	1,023	110	–	1,133
Corporate debt and other debt	–	22,831	21	–	22,852	2	22,303	21	–	22,326
Equities	36,383	2,114	1,107	–	39,604	30,847	2,547	1,148	–	34,542
	53,791	83,926	1,199	–	138,916	42,410	84,503	1,345	–	128,258
<b>Investment</b>										
Issued or guaranteed										
Canadian government debt (1)										
Federal	–	451	–	–	451	–	238	–	–	238
Provincial and municipal	–	2,138	–	–	2,138	–	1,554	–	–	1,554
U.S. state, municipal and agencies debt (1)	–	16,241	–	–	16,241	–	18,136	–	–	18,136
Other OECD government debt	–	4,192	–	–	4,192	–	4,470	–	–	4,470
Mortgage-backed securities (1)	–	2,540	28	–	2,568	–	2,174	–	–	2,174
Asset-backed securities										
CDO	–	7,062	–	–	7,062	–	6,239	–	–	6,239
Non-CDO securities	–	884	–	–	884	–	863	–	–	863
Corporate debt and other debt	–	20,715	146	–	20,861	–	17,227	192	–	17,419
Equities	42	175	296	–	513	42	103	237	–	382
Loan substitute securities	–	24	–	–	24	–	24	–	–	24
	42	54,422	470	–	54,934	42	48,028	429	–	48,499
<b>Assets purchased under reverse repurchase agreements and securities borrowed</b>	–	239,657	–	–	239,657	–	219,108	–	–	219,108
<b>Loans</b>	–	9,161	759	–	9,920	–	8,929	551	–	9,480
<b>Other</b>										
<b>Derivatives</b>										
Interest rate contracts	–	36,222	239	–	36,461	1	33,862	222	–	34,085
Foreign exchange contracts	–	32,343	45	–	32,388	–	43,253	53	–	43,306
Credit derivatives	–	187	–	–	187	–	38	–	–	38
Other contracts	2,724	14,007	57	–	16,788	5,868	11,654	296	–	17,818
Valuation adjustments	–	(643)	3	–	(640)	–	(631)	6	–	(625)
Total gross derivatives	2,724	82,116	344	–	85,184	5,869	88,176	577	–	94,622
Netting adjustments	–	–	–	(372)	(372)	–	–	–	(583)	(583)
Total derivatives	2,724	82,116	344	(372)	84,812	5,869	88,176	577	(583)	94,039
Other assets	1,208	184	66	–	1,458	1,020	288	65	–	1,373
	\$ 57,765	\$ 482,327	\$ 2,838	\$ (372)	\$ 542,558	\$ 49,341	\$ 469,306	\$ 2,967	\$ (583)	\$ 521,031
<b>Financial Liabilities</b>										
<b>Deposits</b>										
Personal	\$ –	\$ 15,840	\$ 192	\$ –	\$ 16,032	\$ –	\$ 14,362	\$ 390	\$ –	\$ 14,752
Business and government	–	109,574	–	–	109,574	–	103,440	(5)	–	103,435
Bank	–	4,601	–	–	4,601	–	7,072	–	–	7,072
<b>Other</b>										
Obligations related to securities sold short	18,107	15,942	–	–	34,049	17,732	14,515	–	–	32,247
Obligations related to assets sold under repurchase agreements and securities loaned	–	218,288	–	–	218,288	–	201,839	–	–	201,839
<b>Derivatives</b>										
Interest rate contracts	–	30,297	824	–	31,121	–	29,620	726	–	30,346
Foreign exchange contracts	–	33,291	28	–	33,319	–	41,836	32	–	41,868
Credit derivatives	–	281	–	–	281	–	94	–	–	94
Other contracts	2,561	15,020	247	–	17,828	4,369	13,730	380	–	18,479
Valuation adjustments	–	(6)	(3)	–	(9)	–	29	5	–	34
Total gross derivatives	2,561	78,883	1,096	–	82,540	4,369	85,309	1,143	–	90,821
Netting adjustments	–	–	–	(372)	(372)	–	–	–	(583)	(583)
Total derivatives	2,561	78,883	1,096	(372)	82,168	4,369	85,309	1,143	(583)	90,238
Other liabilities	187	(1,369)	56	–	(1,126)	170	(1,654)	68	–	(1,416)
	\$ 20,855	\$ 441,759	\$ 1,344	\$ (372)	\$ 463,586	\$ 22,271	\$ 424,883	\$ 1,596	\$ (583)	\$ 448,167

(1) As at April 30, 2019, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were \$22,962 million and \$nil (October 31, 2018 – \$16,776 million and \$nil), respectively, and in all fair value levels of Investment securities were \$6,117 million and \$1,673 million (October 31, 2018 – \$4,713 million and \$1,348 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 April 30, 2019, 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 April 30, 2019, 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 2018 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 April 30, 2019									
	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	
<b>Assets</b>										
<b>Securities</b>										
<b>Trading</b>										
Issued or guaranteed U.S. state, municipal and agencies debt	\$ 65	\$ –	\$ 2	\$ –	\$ –	\$ –	\$ –	\$ 67	\$ –	\$ –
Asset-backed securities										
Non-CDO securities	9	–	–	–	(5)	–	–	4	–	1
Corporate debt and other debt	22	–	–	–	(1)	–	–	21	–	–
Equities	1,076	(29)	16	70	(35)	9	–	1,107	–	(12)
	1,172	(29)	18	70	(41)	9	–	1,199	–	(11)
<b>Investment</b>										
Mortgage-backed securities	27	–	1	–	–	–	–	28	–	n.a.
Corporate debt and other debt	135	–	11	–	–	–	–	146	–	n.a.
Equities	247	–	10	–	39	–	–	296	–	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	–	n.a.
	409	–	22	–	39	–	–	470	–	n.a.
<b>Loans</b>	826	12	1	48	(2)	53	(179)	759	–	5
<b>Other</b>										
Net derivative balances (3)										
Interest rate contracts	(550)	(27)	–	(193)	184	1	–	(585)	–	(31)
Foreign exchange contracts	12	1	3	(1)	–	–	2	17	–	1
Other contracts	(102)	35	(3)	(6)	13	(22)	(105)	(190)	–	14
Valuation adjustments	13	–	–	–	(7)	–	–	6	–	–
Other assets	61	10	1	–	(6)	–	–	66	–	10
	\$ 1,841	\$ 2	\$ 42	\$ (82)	\$ 180	\$ 41	\$ (282)	\$ 1,742	\$ –	(12)
<b>Liabilities</b>										
<b>Deposits</b>										
Personal	\$ (91)	\$ (4)	\$ –	\$ (24)	\$ 6	\$ (107)	\$ 28	\$ (192)	\$ –	(7)
Business and government	–	–	–	–	–	–	–	–	–	–
<b>Other</b>										
Other liabilities	(52)	(5)	(2)	1	2	–	–	(56)	–	(4)
	\$ (143)	\$ (9)	\$ (2)	\$ (23)	\$ 8	\$ (107)	\$ 28	\$ (248)	\$ –	(11)

**Note 3 Fair value of financial instruments** (continued)

	For the three months ended April 30, 2018									
(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	
<b>Assets</b>										
<b>Securities</b>										
<b>Trading</b>										
Issued or guaranteed										
U.S. state, municipal and agencies debt	\$ 187	\$ 12	\$ 8	\$ –	\$ (141)	\$ –	\$ –	\$ 66	\$ 4	
Asset-backed securities										
Non-CDO securities	196	14	5	–	(100)	–	–	115	14	
Corporate debt and other debt	29	(1)	–	–	–	–	(5)	23	–	
Equities	975	(32)	36	54	(33)	–	–	1,000	(18)	
	1,387	(7)	49	54	(274)	–	(5)	1,204	–	
<b>Investment</b>										
Mortgage-backed securities	–	–	–	–	–	–	–	–	n.a.	
Corporate debt and other debt	28	–	1	–	–	4	–	33	n.a.	
Equities	246	–	1	–	(1)	–	–	246	n.a.	
Loan substitute securities	3	–	1	–	–	–	–	4	n.a.	
	277	–	3	–	(1)	4	–	283	n.a.	
<b>Loans</b>	521	3	–	164	(1)	–	–	687	3	
<b>Other</b>										
Net derivative balances (3)										
Interest rate contracts	(512)	(11)	–	23	–	–	(5)	(505)	(11)	
Foreign exchange contracts	33	(2)	2	(1)	(1)	4	(1)	34	(3)	
Other contracts	(157)	(5)	(5)	(18)	(11)	21	63	(112)	(28)	
Valuation adjustments	(11)	–	–	–	(11)	–	–	(22)	–	
Other assets	0	0	0	0	0	0	0	0	0	
	\$ 1,538	\$ (22)	\$ 49	\$ 222	\$ (299)	\$ 29	\$ 52	\$ 1,569	\$ (39)	
<b>Liabilities</b>										
<b>Deposits</b>										
Personal	\$ (554)	\$ (14)	\$ (6)	\$ (18)	\$ 4	\$ (108)	\$ 442	\$ (254)	\$ (5)	
Business and government	–	–	–	–	–	–	–	–	–	
<b>Other</b>										
Other liabilities	(28)	–	(1)	–	5	–	–	(24)	–	
	\$ (582)	\$ (14)	\$ (7)	\$ (18)	\$ 9	\$ (108)	\$ 442	\$ (278)	\$ (5)	

(Millions of Canadian dollars)	For the six months ended April 30, 2019								
	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
<b>Assets</b>									
<b>Securities</b>									
<b>Trading</b>									
Issued or guaranteed U.S. state, municipal and agencies debt	\$ 66	\$ (1)	\$ 2	\$ –	\$ –	\$ –	\$ –	\$ 67	\$ –
Asset-backed securities									
Non-CDO securities	110	15	–	–	(121)	–	–	4	2
Corporate debt and other debt	21	1	–	–	(1)	–	–	21	–
Equities	1,148	(47)	16	150	(178)	18	–	1,107	(17)
	1,345	(32)	18	150	(300)	18	–	1,199	(15)
<b>Investment</b>									
Mortgage-backed securities	–	–	1	27	–	–	–	28	n.a.
Corporate debt and other debt	192	(3)	13	–	(56)	–	–	146	n.a.
Equities	237	–	20	–	39	–	–	296	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	n.a.
	429	(3)	34	27	(17)	–	–	470	n.a.
<b>Loans</b>	551	29	2	312	(4)	53	(184)	759	21
<b>Other</b>									
Net derivative balances (3)									
Interest rate contracts	(504)	(95)	–	(193)	224	3	(20)	(585)	(37)
Foreign exchange contracts	21	(6)	9	1	–	(1)	(7)	17	–
Other contracts	(84)	80	(3)	(15)	(10)	(39)	(119)	(190)	74
Valuation adjustments	1	–	–	–	5	–	–	6	–
Other assets	65	10	1	–	(10)	–	–	66	10
	\$ 1,824	\$ (17)	\$ 61	\$ 282	\$ (112)	\$ 34	\$ (330)	\$ 1,742	\$ 53
<b>Liabilities</b>									
<b>Deposits</b>									
Personal	\$ (390)	\$ (34)	\$ (1)	\$ (33)	\$ 11	\$ (125)	\$ 380	\$ (192)	\$ (5)
Business and government	5	–	–	–	–	–	(5)	–	–
<b>Other</b>									
Other liabilities	(68)	(5)	(2)	1	18	–	–	(56)	(3)
	\$ (453)	\$ (39)	\$ (3)	\$ (32)	\$ 29	\$ (125)	\$ 375	\$ (248)	\$ (8)

**Note 3 Fair value of financial instruments** (continued)

	For the six months ended April 30, 2018									
(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	
<b>Assets</b>										
<b>Securities</b>										
<b>Trading</b>										
Issued or guaranteed										
U.S. state, municipal and agencies debt	\$ 508	\$ 16	\$ (5)	\$ –	\$ (453)	\$ –	\$ –	\$ 66	\$ (1)	
Asset-backed securities										
Non-CDO securities	196	26	(1)	–	(106)	–	–	115	11	
Corporate debt and other debt	30	(2)	–	–	–	–	(5)	23	(1)	
Equities	923	(100)	15	233	(73)	4	(2)	1,000	(41)	
	1,657	(60)	9	233	(632)	4	(7)	1,204	(32)	
<b>Investment</b>										
Mortgage-backed securities	–	–	–	–	–	–	–	–	n.a.	
Corporate debt and other debt	29	(5)	5	–	–	4	–	33	n.a.	
Equities	217	–	27	–	2	–	–	246	n.a.	
Loan substitute securities	3	–	1	–	–	–	–	4	n.a.	
	249	(5)	33	–	2	4	–	283	n.a.	
<b>Loans</b>	477	2	(1)	214	(5)	–	–	687	2	
<b>Other</b>										
Net derivative balances (3)										
Interest rate contracts	(455)	34	–	50	1	–	(135)	(505)	34	
Foreign exchange contracts	21	4	3	(1)	3	5	(1)	34	3	
Other contracts	(181)	48	1	(16)	(45)	(13)	94	(112)	72	
Valuation adjustments	(16)	–	–	–	(6)	–	–	(22)	–	
Other assets	–	–	–	–	–	–	–	–	–	
	\$ 1,752	\$ 23	\$ 45	\$ 480	\$ (682)	\$ –	\$ (49)	\$ 1,569	\$ 79	
<b>Liabilities</b>										
<b>Deposits</b>										
Personal	\$ (465)	\$ (45)	\$ (2)	\$ (167)	\$ 26	\$ (160)	\$ 559	\$ (254)	\$ (14)	
Business and government	–	–	–	–	–	–	–	–	–	
<b>Other</b>										
Other liabilities	(24)	(1)	–	(5)	6	–	–	(24)	–	
	\$ (489)	\$ (46)	\$ (2)	\$ (172)	\$ 32	\$ (160)	\$ 559	\$ (278)	\$ (14)	

(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 \$18 million for the three months ended April 30, 2019 (April 30, 2018 – losses of \$2 million) and gains of \$29 million for the six months ended April 30, 2019 (April 30, 2018 – gains of \$30 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 April 30, 2019 included derivative assets of \$344 million (April 30, 2018 – \$661 million) and derivative liabilities of \$1,096 million (April 30, 2018 – \$1,266 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 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 April 30, 2019, transfers out of Level 1 to Level 2 included Other contracts, consisting of derivative related assets and derivative related liabilities of \$1,996 million and \$621 million, respectively.

During the three months ended April 30, 2019 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 April 30, 2019, significant transfers out of Level 2 to Level 3 include:

- \$107 million in Personal deposits, due to a change in the market observability of inputs.

During the three months ended April 30, 2019, significant transfers out of Level 3 to Level 2 include:

- \$179 million in Loans, due to changes in significance of the unobservable inputs.
- \$93 million of OTC equity options in Other contracts, comprised of \$163 million of derivative related assets and \$70 million of derivative related liabilities, due to changes in the market observability of inputs.

## 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		For the six months ended	
	April 30 2019	April 30 2018 (1)	April 30 2019	April 30 2018 (1)
<b>Interest and dividend income (2), (3)</b>				
Financial instruments measured at fair value through profit or loss	\$ 2,900	\$ 1,847	\$ 5,787	\$ 3,508
Financial instruments measured at fair value through other comprehensive income	288	172	560	324
Financial instruments measured at amortized cost	6,944	5,846	13,934	11,573
	<b>10,132</b>	<b>7,865</b>	<b>20,281</b>	<b>15,405</b>
<b>Interest expense (2)</b>				
Financial instruments measured at fair value through profit or loss	\$ 2,479	\$ 1,456	\$ 4,997	\$ 2,734
Financial instruments measured at amortized cost	2,816	1,988	5,563	3,805
	<b>5,295</b>	<b>3,444</b>	<b>10,560</b>	<b>6,539</b>
<b>Net interest income</b>	<b>\$ 4,837</b>	<b>\$ 4,421</b>	<b>\$ 9,721</b>	<b>\$ 8,866</b>

(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 Interim Consolidated Statements of Income. For the three months ended April 30, 2019, Interest income of \$114 million (April 30, 2018 – \$113 million), and Interest expense of \$1 million (April 30, 2018 – \$2 million). For the six months ended April 30, 2019, Interest Income of \$243 million (April 30, 2018 – \$238 million), and Interest expense of \$2 million (April 30, 2018 – \$3 million).

(3) Includes dividend income for the three months ended April 30, 2019 of \$456 million (April 30, 2018 – \$393 million) and for the six months ended April 30, 2019 of \$893 million (April 30, 2018 – \$760 million).

## Note 4 Securities

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

(Millions of Canadian dollars)	As at							
	April 30, 2019				October 31, 2018			
	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
<b>Issued or guaranteed</b>								
Canadian government debt								
Federal (3)	\$ 450	\$ 2	\$ (1)	\$ 451	\$ 244	\$ –	\$ (6)	\$ 238
Provincial and municipal	2,116	26	(4)	2,138	1,578	2	(26)	1,554
U.S. state, municipal and agencies debt (3)	16,119	203	(81)	16,241	18,000	285	(149)	18,136
Other OECD government debt	4,190	3	(1)	4,192	1,469	2	(1)	1,470
Mortgage-backed securities (3)	2,578	2	(12)	2,568	2,176	1	(3)	2,174
<b>Asset-backed securities</b>								
CDO	7,100	1	(39)	7,062	6,248	1	(10)	6,239
Non-CDO securities	880	6	(2)	884	856	9	(2)	863
Corporate debt and other debt	20,809	61	(9)	20,861	17,439	22	(42)	17,419
Equities	294	221	(2)	513	197	186	(1)	382
Loan substitute securities	25	–	(1)	24	25	–	(1)	24
	<b>\$ 54,561</b>	<b>\$ 525</b>	<b>\$ (152)</b>	<b>\$ 54,934</b>	<b>\$ 48,232</b>	<b>\$ 508</b>	<b>\$ (241)</b>	<b>\$ 48,499</b>

(1) Excludes \$47,141 million of held-to-collect securities as at April 30, 2019 that are carried at amortized cost, net of allowance for credit losses (October 31, 2018 – \$46,109 million).

(2) Gross unrealized gains and losses includes \$1 million of allowance for credit losses on debt securities at FVOCI as at April 30, 2019 (October 31, 2018 – \$11 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 \$1,681 million, \$1 million, \$9 million and \$1,673 million, respectively as at April 30, 2019 (October 31, 2018 – \$1,442 million, \$nil, \$6 million and \$1,436 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** <sup>(1)</sup>

(Millions of Canadian dollars)	For the three months ended							
	April 30, 2019				April 30, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 6	\$ –	\$ 3	\$ 9	\$ 37	\$ 5	\$ –	\$ 42
Provision for credit losses								
Transfers to Stage 1	–	–	–	–	–	–	–	–
Transfers to Stage 2	–	–	–	–	–	–	–	–
Purchases	1	–	–	1	48	–	–	48
Sales and maturities	–	–	–	–	(46)	–	–	(46)
Changes in risk, parameters and exposures	(2)	–	(7)	(9)	(1)	(1)	–	(2)
Exchange rate and other	–	–	–	–	2	1	–	3
Balance at end of period	\$ 5	\$ –	\$ (4)	\$ 1	\$ 40	\$ 5	\$ –	\$ 45

(Millions of Canadian dollars)	For the six months ended							
	April 30, 2019				April 30, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 4	\$ 7	\$ –	\$ 11	\$ 3	\$ 22	\$ –	\$ 25
Provision for credit losses								
Transfers to Stage 1	–	–	–	–	–	–	–	–
Transfers to Stage 2	–	–	–	–	–	–	–	–
Purchases	3	–	–	3	82	–	–	82
Sales and maturities	(1)	(7)	–	(8)	(46)	(17)	–	(63)
Changes in risk, parameters and exposures	(1)	–	(4)	(5)	(1)	1	–	–
Exchange rate and other	–	–	–	–	2	(1)	–	1
Balance at end of period	\$ 5	\$ –	\$ (4)	\$ 1	\$ 40	\$ 5	\$ –	\$ 45

(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.

**Allowance for credit losses – securities at amortized cost**

(Millions of Canadian dollars)	For the three months ended							
	April 30, 2019				April 30, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 6	\$ 30	\$ –	\$ 36	\$ 4	\$ 35	\$ –	\$ 39
Provision for credit losses								
Transfers to Stage 1	–	–	–	–	–	–	–	–
Transfers to Stage 2	–	–	–	–	–	–	–	–
Purchases	3	–	–	3	2	–	–	2
Sales and maturities	–	–	–	–	(1)	(1)	–	(2)
Changes in risk, parameters and exposures	(2)	(8)	–	(10)	(1)	(5)	–	(6)
Exchange rate and other	–	1	–	1	–	2	–	2
Balance at end of period	\$ 7	\$ 23	\$ –	\$ 30	\$ 4	\$ 31	\$ –	\$ 35

(Millions of Canadian dollars)	For the six months ended							
	April 30, 2019				April 30, 2018			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	\$ 6	\$ 32	\$ –	\$ 38	\$ 9	\$ 45	\$ –	\$ 54
Provision for credit losses								
Transfers to Stage 1	–	–	–	–	3	(3)	–	–
Transfers to Stage 2	–	–	–	–	(7)	7	–	–
Purchases	4	–	–	4	3	–	–	3
Sales and maturities	–	–	–	–	(2)	(10)	–	(12)
Changes in risk, parameters and exposures	(3)	(10)	–	(13)	(2)	(7)	–	(9)
Exchange rate and other	–	1	–	1	–	(1)	–	(1)
Balance at end of period	\$ 7	\$ 23	\$ –	\$ 30	\$ 4	\$ 31	\$ –	\$ 35

**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 as at the reporting date as outlined in the internal ratings maps in the Credit risk section of our 2018 Annual Report.

(Millions of Canadian dollars)	As at								
	April 30, 2019				October 31, 2018				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3 (1)	Total	Stage 1	Stage 2	Stage 3 (1)	Total	
<b>Investment securities</b>									
<b>Securities at FVOCI</b>									
Investment grade	\$ 53,783	\$ 3	\$ -	\$ 53,786	\$ 46,956	\$ 479	\$ -	\$ 47,435	
Non-investment grade	471	1	-	472	500	33	-	533	
Impaired	-	-	139	139	-	-	125	125	
	\$ 54,254	\$ 4	\$ 139	\$ 54,397	\$ 47,456	\$ 512	\$ 125	\$ 48,093	
Items not subject to impairment (2)				537				406	
				\$ 54,934				\$ 48,499	
<b>Securities at amortized cost</b>									
Investment grade	\$ 45,780	\$ 78	\$ -	\$ 45,858	\$ 44,958	\$ 119	\$ -	\$ 45,077	
Non-investment grade	676	637	-	1,313	367	703	-	1,070	
Impaired	-	-	-	-	-	-	-	-	
	\$ 46,456	\$ 715	\$ -	\$ 47,171	\$ 45,325	\$ 822	\$ -	\$ 46,147	
Allowance for credit losses	7	23	-	30	6	32	-	38	
Amortized cost	\$ 46,449	\$ 692	\$ -	\$ 47,141	\$ 45,319	\$ 790	\$ -	\$ 46,109	

(1) Includes \$139 million of purchased credit impaired securities (October 31, 2018 – \$125 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									
	April 30, 2019					April 30, 2018				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period
<b>Retail</b>										
Residential mortgages	\$ 409	\$ (2)	\$ (16)	\$ 4	\$ 395	\$ 363	\$ 19	\$ (10)	\$ 9	\$ 381
Personal	892	148	(117)	(1)	922	861	122	(107)	–	876
Credit cards	780	135	(125)	–	790	680	136	(123)	1	694
Small business	51	7	(8)	(1)	49	50	8	(5)	(1)	52
Wholesale	1,110	158	(155)	(5)	1,108	1,025	(5)	(18)	10	1,012
Customers' liability under acceptances	31	(5)	–	–	26	16	(2)	–	1	15
	<b>\$ 3,273</b>	<b>\$ 441</b>	<b>\$ (421)</b>	<b>\$ (3)</b>	<b>\$ 3,290</b>	<b>\$ 2,995</b>	<b>\$ 278</b>	<b>\$ (263)</b>	<b>\$ 20</b>	<b>\$ 3,030</b>
<b>Presented as:</b>										
Allowance for loan losses	\$ 3,061				\$ 3,093	\$ 2,776				\$ 2,808
Other liabilities – Provisions	180				171	202				206
Customers' liability under acceptances	31				26	16				15
Other components of equity	1				–	1				1

(Millions of Canadian dollars)	For the six months ended									
	April 30, 2019					April 30, 2018				
	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period	Balance at beginning of period	Provision for credit losses	Net write-offs	Exchange rate and other (1)	Balance at end of period
<b>Retail</b>										
Residential mortgages	\$ 382	\$ 31	\$ (20)	\$ 2	\$ 395	\$ 378	\$ 32	\$ (23)	\$ (6)	\$ 381
Personal	895	271	(230)	(14)	922	826	267	(209)	(8)	876
Credit cards	760	275	(245)	–	790	693	234	(233)	–	694
Small business	51	13	(13)	(2)	49	49	17	(12)	(2)	52
Wholesale	979	362	(216)	(17)	1,108	1,010	67	(36)	(29)	1,012
Customers' liability under acceptances	21	5	–	–	26	20	(5)	–	–	15
	<b>\$ 3,088</b>	<b>\$ 957</b>	<b>\$ (724)</b>	<b>\$ (31)</b>	<b>\$ 3,290</b>	<b>\$ 2,976</b>	<b>\$ 612</b>	<b>\$ (513)</b>	<b>\$ (45)</b>	<b>\$ 3,030</b>
<b>Presented as:</b>										
Allowance for loan losses	\$ 2,912				\$ 3,093	\$ 2,749				\$ 2,808
Other liabilities – Provisions	154				171	207				206
Customers' liability under acceptances	21				26	20				15
Other components of equity	1				–	–				1

(1) Includes interest income on impaired loans of \$24 million for the three months ended April 30, 2019 (April 30, 2018 – \$20 million) and \$45 million for the six months ended April 30, 2019 (April 30, 2018 – \$37 million).

The following tables reconcile 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.

## Allowance for credit losses – Retail and wholesale loans

(Millions of Canadian dollars)	For the three months ended								
	April 30, 2019				April 30, 2018				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
<b>Residential mortgages</b>									
Balance at beginning of period	\$ 138	\$ 79	\$ 192	\$ 409	\$ 130	\$ 67	\$ 166	\$ 363	
Provision for credit losses									
Transfers to Stage 1	35	(28)	(7)	–	17	(17)	–	–	
Transfers to Stage 2	(2)	3	(1)	–	(6)	7	(1)	–	
Transfers to Stage 3	–	(10)	10	–	(1)	(5)	6	–	
Originations	10	–	–	10	17	–	–	17	
Maturities	(3)	(1)	–	(4)	(3)	(2)	–	(5)	
Changes in risk, parameters and exposures	(39)	19	12	(8)	(10)	9	8	7	
Write-offs	–	–	(17)	(17)	–	–	(11)	(11)	
Recoveries	–	–	1	1	–	–	1	1	
Exchange rate and other	1	1	2	4	5	3	1	9	
Balance at end of period	\$ 140	\$ 63	\$ 192	\$ 395	\$ 149	\$ 62	\$ 170	\$ 381	
<b>Personal</b>									
Balance at beginning of period	\$ 235	\$ 519	\$ 138	\$ 892	\$ 275	\$ 459	\$ 127	\$ 861	
Provision for credit losses									
Transfers to Stage 1	142	(136)	(6)	–	218	(218)	–	–	
Transfers to Stage 2	(23)	24	(1)	–	(50)	50	–	–	
Transfers to Stage 3	(1)	(40)	41	–	(1)	(35)	36	–	
Originations	23	1	–	24	25	1	–	26	
Maturities	(5)	(27)	–	(32)	(7)	(30)	–	(37)	
Changes in risk, parameters and exposures	(134)	214	76	156	(207)	261	79	133	
Write-offs	–	–	(148)	(148)	–	–	(137)	(137)	
Recoveries	–	–	31	31	–	–	30	30	
Exchange rate and other	1	–	(2)	(1)	–	–	–	–	
Balance at end of period	\$ 238	\$ 555	\$ 129	\$ 922	\$ 253	\$ 488	\$ 135	\$ 876	
<b>Credit cards</b>									
Balance at beginning of period	\$ 168	\$ 612	\$ –	\$ 780	\$ 212	\$ 468	\$ –	\$ 680	
Provision for credit losses									
Transfers to Stage 1	118	(118)	–	–	216	(216)	–	–	
Transfers to Stage 2	(20)	20	–	–	(41)	41	–	–	
Transfers to Stage 3	(1)	(83)	84	–	(1)	(55)	56	–	
Originations	1	–	–	1	3	–	–	3	
Maturities	(1)	(5)	–	(6)	(3)	(13)	–	(16)	
Changes in risk, parameters and exposures	(98)	197	41	140	(189)	271	67	149	
Write-offs	–	–	(158)	(158)	–	–	(155)	(155)	
Recoveries	–	–	33	33	–	–	32	32	
Exchange rate and other	(1)	1	–	–	2	(1)	–	1	
Balance at end of period	\$ 166	\$ 624	\$ –	\$ 790	\$ 199	\$ 495	\$ –	\$ 694	
<b>Small business</b>									
Balance at beginning of period	\$ 16	\$ 18	\$ 17	\$ 51	\$ 17	\$ 15	\$ 18	\$ 50	
Provision for credit losses									
Transfers to Stage 1	6	(6)	–	–	7	(7)	–	–	
Transfers to Stage 2	(1)	1	–	–	(1)	1	–	–	
Transfers to Stage 3	–	(2)	2	–	–	(3)	3	–	
Originations	2	–	–	2	2	–	–	2	
Maturities	(1)	(2)	–	(3)	(1)	(2)	–	(3)	
Changes in risk, parameters and exposures	(7)	8	7	8	(8)	12	5	9	
Write-offs	–	–	(10)	(10)	–	–	(7)	(7)	
Recoveries	–	–	2	2	–	–	2	2	
Exchange rate and other	–	–	(1)	(1)	(1)	1	(1)	(1)	
Balance at end of period	\$ 15	\$ 17	\$ 17	\$ 49	\$ 15	\$ 17	\$ 20	\$ 52	
<b>Wholesale</b>									
Balance at beginning of period	\$ 301	\$ 361	\$ 448	\$ 1,110	\$ 249	\$ 334	\$ 442	\$ 1,025	
Provision for credit losses									
Transfers to Stage 1	54	(45)	(9)	–	67	(67)	–	–	
Transfers to Stage 2	(8)	8	–	–	(11)	14	(3)	–	
Transfers to Stage 3	(2)	(17)	19	–	(1)	(13)	14	–	
Originations	59	17	–	76	59	9	–	68	
Maturities	(46)	(36)	–	(82)	(37)	(56)	–	(93)	
Changes in risk, parameters and exposures	(68)	65	167	164	(76)	68	28	20	
Write-offs	–	–	(168)	(168)	–	–	(36)	(36)	
Recoveries	–	–	13	13	–	–	18	18	
Exchange rate and other	3	5	(13)	(5)	4	6	–	10	
Balance at end of period	\$ 293	\$ 358	\$ 457	\$ 1,108	\$ 254	\$ 295	\$ 463	\$ 1,012	

**Note 5 Loans and allowance for credit losses** (continued)

For the six months ended

(Millions of Canadian dollars)	For the six months ended								
	April 30, 2019				April 30, 2018				
	Performing		Impaired		Performing		Impaired		
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	
<b>Residential mortgages</b>									
Balance at beginning of period	\$ 142	\$ 64	\$ 176	\$ 382	\$ 140	\$ 65	\$ 173	\$ 378	
Provision for credit losses									
Transfers to Stage 1	43	(36)	(7)	–	39	(39)	–	–	
Transfers to Stage 2	(5)	7	(2)	–	(11)	12	(1)	–	
Transfers to Stage 3	(1)	(18)	19	–	(1)	(8)	9	–	
Originations	23	–	–	23	33	–	–	33	
Maturities	(6)	(3)	–	(9)	(6)	(5)	–	(11)	
Changes in risk, parameters and exposures	(57)	49	25	17	(46)	36	20	10	
Write-offs	–	–	(22)	(22)	–	–	(25)	(25)	
Recoveries	–	–	2	2	–	–	2	2	
Exchange rate and other	1	–	1	2	1	1	(8)	(6)	
Balance at end of period	\$ 140	\$ 63	\$ 192	\$ 395	\$ 149	\$ 62	\$ 170	\$ 381	
<b>Personal</b>									
Balance at beginning of period	\$ 242	\$ 512	\$ 141	\$ 895	\$ 278	\$ 427	\$ 121	\$ 826	
Provision for credit losses									
Transfers to Stage 1	274	(268)	(6)	–	422	(422)	–	–	
Transfers to Stage 2	(46)	47	(1)	–	(92)	92	–	–	
Transfers to Stage 3	(1)	(84)	85	–	(1)	(78)	79	–	
Originations	46	1	–	47	51	3	–	54	
Maturities	(12)	(57)	–	(69)	(16)	(65)	–	(81)	
Changes in risk, parameters and exposures	(266)	404	155	293	(387)	532	149	294	
Write-offs	–	–	(292)	(292)	–	–	(266)	(266)	
Recoveries	–	–	62	62	–	–	57	57	
Exchange rate and other	1	–	(15)	(14)	(2)	(1)	(5)	(8)	
Balance at end of period	\$ 238	\$ 555	\$ 129	\$ 922	\$ 253	\$ 488	\$ 135	\$ 876	
<b>Credit cards</b>									
Balance at beginning of period	\$ 161	\$ 599	\$ –	\$ 760	\$ 251	\$ 442	\$ –	\$ 693	
Provision for credit losses									
Transfers to Stage 1	228	(228)	–	–	444	(444)	–	–	
Transfers to Stage 2	(39)	39	–	–	(81)	81	–	–	
Transfers to Stage 3	(1)	(163)	164	–	(1)	(92)	93	–	
Originations	2	–	–	2	6	1	–	7	
Maturities	(2)	(11)	–	(13)	(7)	(43)	–	(50)	
Changes in risk, parameters and exposures	(182)	387	81	286	(413)	550	140	277	
Write-offs	–	–	(311)	(311)	–	–	(297)	(297)	
Recoveries	–	–	66	66	–	–	64	64	
Exchange rate and other	(1)	1	–	–	–	–	–	–	
Balance at end of period	\$ 166	\$ 624	\$ –	\$ 790	\$ 199	\$ 495	\$ –	\$ 694	
<b>Small business</b>									
Balance at beginning of period	\$ 17	\$ 16	\$ 18	\$ 51	\$ 15	\$ 15	\$ 19	\$ 49	
Provision for credit losses									
Transfers to Stage 1	11	(11)	–	–	15	(15)	–	–	
Transfers to Stage 2	(2)	2	–	–	(3)	3	–	–	
Transfers to Stage 3	–	(5)	5	–	–	(6)	6	–	
Originations	5	–	–	5	5	–	–	5	
Maturities	(2)	(4)	–	(6)	(2)	(4)	–	(6)	
Changes in risk, parameters and exposures	(14)	19	9	14	(15)	24	9	18	
Write-offs	–	–	(17)	(17)	–	–	(16)	(16)	
Recoveries	–	–	4	4	–	–	4	4	
Exchange rate and other	–	–	(2)	(2)	–	–	(2)	(2)	
Balance at end of period	\$ 15	\$ 17	\$ 17	\$ 49	\$ 15	\$ 17	\$ 20	\$ 52	
<b>Wholesale</b>									
Balance at beginning of period	\$ 274	\$ 340	\$ 365	\$ 979	\$ 251	\$ 352	\$ 407	\$ 1,010	
Provision for credit losses									
Transfers to Stage 1	78	(69)	(9)	–	125	(125)	–	–	
Transfers to Stage 2	(17)	19	(2)	–	(46)	49	(3)	–	
Transfers to Stage 3	(3)	(33)	36	–	(1)	(19)	20	–	
Originations	127	27	–	154	111	17	–	128	
Maturities	(89)	(79)	–	(168)	(78)	(108)	–	(186)	
Changes in risk, parameters and exposures	(79)	149	306	376	(108)	131	102	125	
Write-offs	–	–	(236)	(236)	–	–	(63)	(63)	
Recoveries	–	–	20	20	–	–	27	27	
Exchange rate and other	2	4	(23)	(17)	–	(2)	(27)	(29)	
Balance at end of period	\$ 293	\$ 358	\$ 457	\$ 1,108	\$ 254	\$ 295	\$ 463	\$ 1,012	

**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 as at the reporting date as outlined in the internal ratings maps for Wholesale and Retail facilities in the Credit risk section of our 2018 Annual Report.

(Millions of Canadian dollars)	As at							
	April 30, 2019				October 31, 2018			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
<b>Retail</b>								
<b>Loans outstanding – Residential mortgages</b>								
Low risk	\$ 226,803	\$ 5,351	\$ –	\$ 232,154	\$ 222,026	\$ 3,688	\$ –	\$ 225,714
Medium risk	13,174	1,289	–	14,463	13,681	1,369	–	15,050
High risk	2,647	2,749	–	5,396	2,577	2,897	–	5,474
Not rated (1)	36,469	570	–	37,039	34,670	578	–	35,248
Impaired	–	–	754	754	–	–	726	726
	279,093	9,959	754	289,806	272,954	8,532	726	282,212
Items not subject to impairment (2)				330				259
<b>Total</b>				<b>290,136</b>				<b>282,471</b>
<b>Loans outstanding – Personal</b>								
Low risk	\$ 71,220	\$ 1,638	\$ –	\$ 72,858	\$ 71,763	\$ 1,256	\$ –	\$ 73,019
Medium risk	6,055	2,057	–	8,112	6,124	1,925	–	8,049
High risk	929	1,701	–	2,630	998	1,672	–	2,670
Not rated (1)	8,271	84	–	8,355	8,595	64	–	8,659
Impaired	–	–	316	316	–	–	303	303
<b>Total</b>	<b>86,475</b>	<b>5,480</b>	<b>316</b>	<b>92,271</b>	<b>87,480</b>	<b>4,917</b>	<b>303</b>	<b>92,700</b>
<b>Loans outstanding – Credit cards</b>								
Low risk	\$ 13,285	\$ 104	\$ –	\$ 13,389	\$ 13,185	\$ 100	\$ –	\$ 13,285
Medium risk	2,223	1,707	–	3,930	2,234	1,632	–	3,866
High risk	136	1,404	–	1,540	139	1,331	–	1,470
Not rated (1)	850	31	–	881	764	30	–	794
<b>Total</b>	<b>16,494</b>	<b>3,246</b>	<b>–</b>	<b>19,740</b>	<b>16,322</b>	<b>3,093</b>	<b>–</b>	<b>19,415</b>
<b>Loans outstanding – Small business</b>								
Low risk	\$ 2,178	\$ 31	\$ –	\$ 2,209	\$ 2,004	\$ 46	\$ –	\$ 2,050
Medium risk	2,255	108	–	2,363	2,230	102	–	2,332
High risk	108	192	–	300	95	178	–	273
Not rated (1)	154	1	–	155	166	1	–	167
Impaired	–	–	48	48	–	–	44	44
<b>Total</b>	<b>4,695</b>	<b>332</b>	<b>48</b>	<b>5,075</b>	<b>4,495</b>	<b>327</b>	<b>44</b>	<b>4,866</b>
<b>Undrawn loan commitments – Retail</b>								
Low risk	\$ 191,408	\$ 1,711	\$ –	\$ 193,119	\$ 182,426	\$ 1,270	\$ –	\$ 183,696
Medium risk	9,600	242	–	9,842	10,794	239	–	11,033
High risk	2,161	212	–	2,373	3,740	166	–	3,906
Not rated (1)	2,571	61	–	2,632	2,584	35	–	2,619
<b>Total</b>	<b>205,740</b>	<b>2,226</b>	<b>–</b>	<b>207,966</b>	<b>199,544</b>	<b>1,710</b>	<b>–</b>	<b>201,254</b>
<b>Wholesale – Loans outstanding</b>								
Investment grade	\$ 54,393	\$ 81	\$ –	\$ 54,474	\$ 46,869	\$ 324	\$ –	\$ 47,193
Non-investment grade	114,584	11,279	–	125,863	106,027	10,190	–	116,217
Not rated (1)	6,637	379	–	7,016	6,692	411	–	7,103
Impaired	–	–	1,892	1,892	–	–	1,096	1,096
	175,614	11,739	1,892	189,245	159,588	10,925	1,096	171,609
Items not subject to impairment (2)				9,017				8,669
<b>Total</b>				<b>198,262</b>				<b>180,278</b>
<b>Undrawn loan commitments – Wholesale</b>								
Investment grade	\$ 216,669	\$ –	\$ –	\$ 216,669	\$ 222,970	\$ 93	\$ –	\$ 223,063
Non-investment grade	90,864	7,926	–	98,790	88,828	7,069	–	95,897
Not rated (1)	5,080	–	–	5,080	4,291	–	–	4,291
<b>Total</b>	<b>312,613</b>	<b>7,926</b>	<b>–</b>	<b>320,539</b>	<b>316,089</b>	<b>7,162</b>	<b>–</b>	<b>323,251</b>

(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** <sup>(1)</sup>

(Millions of Canadian dollars)	As at							
	April 30, 2019				October 31, 2018			
	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	\$ 2,779	\$ 1,333	\$ 190	\$ 4,302	\$ 2,995	\$ 1,402	\$ 179	\$ 4,576
Wholesale	1,408	334	–	1,742	1,246	468	–	1,714
	\$ 4,187	\$ 1,667	\$ 190	\$ 6,044	\$ 4,241	\$ 1,870	\$ 179	\$ 6,290

(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							
	April 30, 2019				October 31, 2018			
	Demand (1)	Notice (2)	Term (3)	Total	Demand (1)	Notice (2)	Term (3)	Total
Personal	\$ 139,399	\$ 49,870	\$ 97,226	\$ 286,495	\$ 135,101	\$ 48,873	\$ 86,180	\$ 270,154
Business and government	243,387	10,567	290,713	544,667	238,617	8,606	287,148	534,371
Bank	7,754	206	24,979	32,939	8,750	299	23,472	32,521
	\$ 390,540	\$ 60,643	\$ 412,918	\$ 864,101	\$ 382,468	\$ 57,778	\$ 396,800	\$ 837,046
<b>Non-interest-bearing</b> <sup>(4)</sup>								
Canada	\$ 91,496	\$ 5,555	\$ –	\$ 97,051	\$ 88,119	\$ 5,086	\$ –	\$ 93,205
United States	32,318	–	–	32,318	34,098	–	–	34,098
Europe <sup>(5)</sup>	710	–	–	710	564	–	–	564
Other International	5,667	5	–	5,672	5,495	5	–	5,500
<b>Interest-bearing</b> <sup>(4)</sup>								
Canada	219,759	15,342	316,446	551,547	213,747	15,112	292,641	521,500
United States	2,537	35,525	53,294	91,356	2,478	33,099	67,211	102,788
Europe <sup>(5)</sup>	32,587	1,016	29,860	63,463	32,930	1,412	26,598	60,940
Other International	5,466	3,200	13,318	21,984	5,037	3,064	10,350	18,451
	\$ 390,540	\$ 60,643	\$ 412,918	\$ 864,101	\$ 382,468	\$ 57,778	\$ 396,800	\$ 837,046

(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 April 30, 2019, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were \$314 billion, \$21 billion, \$43 billion and \$33 billion, respectively (October 31, 2018 – \$309 billion, \$20 billion, \$38 billion and \$32 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	
	April 30 2019	October 31 2018
Within 1 year:		
less than 3 months	\$ 106,917	\$ 89,553
3 to 6 months	53,654	59,109
6 to 12 months	85,007	80,773
1 to 2 years	56,525	51,798
2 to 3 years	42,174	45,550
3 to 4 years	18,007	21,127
4 to 5 years	24,258	23,863
Over 5 years	26,376	25,027
	\$ 412,918	\$ 396,800
<b>Aggregate amount of term deposits in denominations of one hundred thousand dollars or more</b> <sup>(1)</sup>	\$ 375,000	\$ 362,000

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

**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	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
Current service costs	\$ 74	\$ 90	\$ 9	\$ 9
Net interest expense (income)	(5)	2	17	18
Remeasurements of other long term benefits	–	–	4	(1)
Administrative expense	4	3	–	–
Defined benefit pension expense	\$ 73	\$ 95	\$ 30	\$ 26
Defined contribution pension expense	50	43	–	–
	\$ 123	\$ 138	\$ 30	\$ 26

(Millions of Canadian dollars)	For the six months ended			
	Pension plans		Other post-employment benefit plans	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
Current service costs	\$ 148	\$ 179	\$ 19	\$ 19
Net interest expense (income)	(10)	4	33	34
Remeasurements of other long term benefits	–	–	6	(1)
Administrative expense	8	7	–	–
Defined benefit pension expense	\$ 146	\$ 190	\$ 58	\$ 52
Defined contribution pension expense	111	95	–	–
	\$ 257	\$ 285	\$ 58	\$ 52

**Pension and other post-employment benefit remeasurements <sup>(1)</sup>**

(Millions of Canadian dollars)	For the three months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
Actuarial (gains) losses:				
Changes in financial assumptions	\$ 653	\$ (211)	\$ 60	\$ (22)
Experience adjustments	–	–	(2)	(4)
Return on plan assets (excluding interest based on discount rate)	(574)	123	–	–
	\$ 79	\$ (88)	\$ 58	\$ (26)

(Millions of Canadian dollars)	For the six months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
Actuarial (gains) losses:				
Changes in financial assumptions	\$ 1,260	\$ (193)	\$ 117	\$ (22)
Experience adjustments	–	–	(3)	(6)
Return on plan assets (excluding interest based on discount rate)	(718)	38	–	–
	\$ 542	\$ (155)	\$ 114	\$ (28)

(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.

**Note 8 Income taxes***Tax examinations and assessments*

During the second quarter, we received proposal letters (the Proposals) from the Canada Revenue Agency (CRA), in respect of the 2014 taxation year, which suggests that Royal Bank of Canada owes additional taxes of approximately \$295 million as the tax deductibility of certain dividends was denied on the basis that they were part of a “dividend rental arrangement”. This amount represents the maximum additional tax owing for that year. The Proposals are consistent with the previously received proposal letters and reassessments, which were described in Note 22 of our 2018 Annual Consolidated Financial Statements.

During the first quarter, we received reassessments that are consistent with the previously received proposal letters from the CRA in respect of the 2013 and 2012 taxation years.

In all cases, we are confident that our tax filing position was appropriate and intend to defend ourselves vigorously.

**Note 9 Significant capital and funding transactions****Preferred shares**

On November 2, 2018, we issued 14 million Non-Cumulative 5-Year Rate Reset First Preferred Shares Series BO at a price of \$25 per share, for total gross proceeds of \$350 million. For the initial five year period to the earliest redemption date of February 24, 2024, the Series BO Preferred Shares pay quarterly cash dividends, if declared, at a rate of 4.8% per annum. The dividend rate will reset on the earliest redemption date and every fifth year thereafter at a rate equal to the 5-year Government of Canada bond yield plus a premium of 2.38%. Holders have the option to convert their shares into Non-Cumulative Floating Rate First Preferred Shares, Series BP, subject to certain conditions, on the earliest redemption date and every fifth year thereafter at a rate equal to the 3-month Government of Canada Treasury Bill yield plus 2.38%. Subject to the consent of OSFI and the requirements of the Bank Act (Canada), we may redeem the Series BO Preferred Shares in whole or in part at a price per share of \$25 on the earliest redemption date and every fifth year thereafter. The Series BO Preferred Shares include NVCC provisions which are necessary for the shares to qualify as Tier 1 regulatory capital.

On November 24, 2018, we redeemed all 10 million Non-Cumulative First Preferred Shares Series AD at a price of \$25 per share.

On February 24, 2019, we redeemed all 2.4 million Non-Cumulative First Preferred Shares Series AK, all 13.6 million Non-Cumulative 5 year Rate Reset First Preferred Shares Series AJ, and all 12 million Non-Cumulative 5-year Rate Reset First Preferred Shares Series AL, at a price of \$25 per share.

**Common shares issued** <sup>(1)</sup>

	For the three months ended			
	April 30, 2019		April 30, 2018	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
(Millions of Canadian dollars, except number of shares)				
Issued in connection with share-based compensation plans <sup>(2)</sup>	526	\$ 38	201	\$ 15
Purchased for cancellation <sup>(3)</sup>	(107)	(1)	(2,257)	(28)
	419	\$ 37	(2,056)	\$ (13)

	For the six months ended			
	April 30, 2019		April 30, 2018	
	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
(Millions of Canadian dollars, except number of shares)				
Issued in connection with share-based compensation plans <sup>(2)</sup>	685	\$ 49	665	\$ 45
Purchased for cancellation <sup>(3)</sup>	(3,791)	(46)	(11,554)	(141)
	(3,106)	\$ 3	(10,889)	\$ (96)

(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 and six months ended April 30, 2019 and April 30, 2018, 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 April 30, 2019, we purchased for cancellation common shares at a total fair value of \$11 million (average cost of \$101.41 per share), with a book value of \$1 million (book value of \$12.27 per share). During the six months ended April 30, 2019, we purchased for cancellation common shares at a total fair value of \$359 million (average cost of \$94.60 per share), with a book value of \$46 million (book value of \$12.26 per share). During the three months ended April 30, 2018, we purchased for cancellation common shares at a total fair value of \$224 million (average cost of \$99.30 per share), with a book value of \$28 million (book value of \$12.22 per share). During the six months ended April 30, 2018, we purchased for cancellation common shares at a total fair value of \$1,147 million (average cost of \$99.29 per share), with a book value of \$141 million (book value of \$12.22 per share).

**Note 10 Earnings per share**

	For the three months ended		For the six months ended	
	April 30 2019	April 30 2018	April 30 2019	April 30 2018
(Millions of Canadian dollars, except share and per share amounts)				
<b>Basic earnings per share</b>				
Net income	\$ 3,230	\$ 3,060	\$ 6,402	\$ 6,072
Preferred share dividends	(65)	(72)	(139)	(144)
Net income attributable to non-controlling interest	(4)	(9)	(6)	(20)
Net income available to common shareholders	3,161	2,979	6,257	5,908
Weighted average number of common shares (in thousands)	1,435,091	1,443,084	1,436,099	1,447,504
Basic earnings per share (in dollars)	\$ 2.20	\$ 2.06	\$ 4.36	\$ 4.08
<b>Diluted earnings per share</b>				
Net income available to common shareholders	\$ 3,161	\$ 2,979	\$ 6,257	\$ 5,908
Dilutive impact of exchangeable shares	3	3	7	7
Net income available to common shareholders including dilutive impact of exchangeable shares	3,164	2,982	6,264	5,915
Weighted average number of common shares (in thousands)	1,435,091	1,443,084	1,436,099	1,447,504
Stock options (1)	2,224	2,716	2,125	2,894
Issuable under other share-based compensation plans	740	754	739	753
Exchangeable shares (2)	3,108	3,183	3,231	3,148
Average number of diluted common shares (in thousands)	1,441,163	1,449,737	1,442,194	1,454,299
Diluted earnings per share (in dollars)	\$ 2.20	\$ 2.06	\$ 4.34	\$ 4.07

- (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 April 30, 2018, an average of 738,258 outstanding options with an average exercise price of \$102.33 were excluded from the calculation of diluted earnings per share. For the three months ended April 30, 2019, no outstanding options were excluded from the calculation of diluted earnings per share. For the six months ended April 30, 2018, an average of 761,317 outstanding options with an average price of \$102.33 were excluded from the calculation of diluted earnings per share. For the six months ended April 30, 2019, an average of 575,107 outstanding options with an average exercise price of \$102.33 were excluded from the calculation of diluted earnings per share.
- (2) Includes exchangeable preferred shares.

**Note 11 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. As a result, 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 proceedings and regulatory matters are those disclosed in our audited 2018 Annual Consolidated Financial Statements as updated below:

*LIBOR regulatory investigations and litigation*

In January 2019, a number of financial institutions, including Royal Bank of Canada and RBC Capital Markets LLC, were named in a purported class action in New York alleging violations of the U.S. antitrust laws and common law principles of unjust enrichment in the setting of London interbank offered rate (LIBOR) after the Intercontinental Exchange took over administration of the benchmark interest rate from the British Bankers' Association in 2014. Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of these proceedings or the timing of their resolution.

*Interchange fees litigation*

The trial in the Watson proceeding has been rescheduled from October 14, 2019 to October 19, 2020.

## Note 12 Results by business segment

(Millions of Canadian dollars)	For the three months ended April 30, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 3,060	\$ 731	\$ –	\$ (34)	\$ 1,057	\$ 23	\$ 4,837
Non-interest income	1,273	2,248	1,515	621	1,112	(107)	6,662
Total revenue	4,333	2,979	1,515	587	2,169	(84)	11,499
Provision for credit losses	372	30	–	–	25	(1)	426
Insurance policyholder benefits, claims and acquisition expense	–	–	1,160	–	–	–	1,160
Non-interest expense	1,887	2,204	150	388	1,289	(2)	5,916
Net income (loss) before income taxes	2,074	745	205	199	855	(81)	3,997
Income taxes (recoveries)	525	160	51	48	79	(96)	767
<b>Net income</b>	<b>\$ 1,549</b>	<b>\$ 585</b>	<b>\$ 154</b>	<b>\$ 151</b>	<b>\$ 776</b>	<b>\$ 15</b>	<b>\$ 3,230</b>
Non-interest expense includes: Depreciation and amortization	\$ 157	\$ 152	\$ 12	\$ 35	\$ 100	\$ –	\$ 456

(Millions of Canadian dollars)	For the three months ended April 30, 2018						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 2,852	\$ 632	\$ –	\$ 118	\$ 841	\$ (22)	\$ 4,421
Non-interest income	1,251	1,973	806	553	1,169	(119)	5,633
Total revenue	4,103	2,605	806	671	2,010	(141)	10,054
Provision for credit losses	300	(20)	–	–	(7)	1	274
Insurance policyholder benefits, claims and acquisition expense	–	–	421	–	–	–	421
Non-interest expense	1,828	1,939	148	391	1,190	(14)	5,482
Net income (loss) before income taxes	1,975	686	237	280	827	(128)	3,877
Income taxes (recoveries)	516	149	65	68	162	(143)	817
<b>Net income</b>	<b>\$ 1,459</b>	<b>\$ 537</b>	<b>\$ 172</b>	<b>\$ 212</b>	<b>\$ 665</b>	<b>\$ 15</b>	<b>\$ 3,060</b>
Non-interest expense includes: Depreciation and amortization	\$ 145	\$ 133	\$ 9	\$ 30	\$ 90	\$ –	\$ 407

(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.

(Millions of Canadian dollars)	For the six months ended April 30, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 6,194	\$ 1,475	\$ –	\$ (65)	\$ 2,063	\$ 54	\$ 9,721
Non-interest income	2,557	4,452	3,094	1,283	2,204	(223)	13,367
Total revenue	8,751	5,927	3,094	1,218	4,267	(169)	23,088
Provision for credit losses	720	56	–	–	165	(1)	940
Insurance policyholder benefits, claims and acquisition expense	–	–	2,385	–	–	–	2,385
Non-interest expense	3,802	4,368	304	806	2,519	29	11,828
Net income (loss) before income taxes	4,229	1,503	405	412	1,583	(197)	7,935
Income taxes (recoveries)	1,109	321	85	100	154	(236)	1,533
<b>Net income</b>	<b>\$ 3,120</b>	<b>\$ 1,182</b>	<b>\$ 320</b>	<b>\$ 312</b>	<b>\$ 1,429</b>	<b>\$ 39</b>	<b>\$ 6,402</b>
Non-interest expense includes:							
Depreciation and amortization	\$ 310	\$ 299	\$ 23	\$ 69	\$ 195	\$ –	\$ 896

(Millions of Canadian dollars)	For the six months ended April 30, 2018						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2)	\$ 5,708	\$ 1,244	\$ –	\$ 246	\$ 1,707	\$ (39)	\$ 8,866
Non-interest income	2,560	4,144	1,950	1,101	2,478	(217)	12,016
Total revenue	8,268	5,388	1,950	1,347	4,185	(256)	20,882
Provision for credit losses	617	(22)	–	–	13	–	608
Insurance policyholder benefits, claims and acquisition expense	–	–	1,257	–	–	–	1,257
Non-interest expense	3,629	3,950	290	780	2,404	40	11,093
Net income (loss) before income taxes	4,022	1,460	403	567	1,768	(296)	7,924
Income taxes (recoveries)	1,042	326	104	136	355	(111)	1,852
<b>Net income</b>	<b>\$ 2,980</b>	<b>\$ 1,134</b>	<b>\$ 299</b>	<b>\$ 431</b>	<b>\$ 1,413</b>	<b>\$ (185)</b>	<b>\$ 6,072</b>
Non-interest expense includes:							
Depreciation and amortization	\$ 285	\$ 263	\$ 18	\$ 60	\$ 177	\$ –	\$ 803

(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.

**Total assets and total liabilities by business segment**

(Millions of Canadian dollars)	As at April 30, 2019						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 463,861	\$ 99,175	\$ 17,703	\$ 135,817	\$ 617,468	\$ 44,852	\$ 1,378,876
Total liabilities	\$ 463,882	\$ 99,350	\$ 17,711	\$ 135,741	\$ 617,261	\$ (37,015)	\$ 1,296,930

(Millions of Canadian dollars)	As at October 31, 2018						
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Total assets	\$ 453,879	\$ 93,063	\$ 16,210	\$ 136,030	\$ 590,950	\$ 44,602	\$ 1,334,734
Total liabilities	\$ 453,878	\$ 93,162	\$ 16,289	\$ 135,944	\$ 590,582	\$ (35,076)	\$ 1,254,779



**Note 13 Capital management****Regulatory capital and capital ratios**

OSFI formally establishes risk-based capital and leverage targets for deposit-taking institutions in Canada. During the second quarter of 2019, we complied with all capital and leverage requirements, including the domestic stability buffer, imposed by OSFI.

(Millions of Canadian dollars, except Capital ratios and leverage ratios)	As at	
	April 30 2019	October 31 2018
<b>Capital</b> <sup>(1)</sup>		
CET1 capital	\$ 60,314	\$ 57,001
Tier 1 capital	65,992	63,279
Total capital	75,491	72,494
<b>Risk-weighted Assets (RWA) used in calculation of capital ratios</b> <sup>(1) (2)</sup>		
CET1 capital RWA	\$ 510,463	\$ 495,528
Tier 1 capital RWA	510,463	495,993
Total capital RWA	510,463	496,459
Total capital RWA consisting of: <sup>(1)</sup>		
Credit risk	\$ 414,523	\$ 401,534
Market risk	31,453	32,209
Operational risk	64,487	62,716
<b>Total Capital RWA</b>	<b>\$ 510,463</b>	<b>\$ 496,459</b>
<b>Capital ratios and Leverage ratios</b> <sup>(1)</sup>		
CET1 ratio	11.8%	11.5%
Tier 1 capital ratio	12.9%	12.8%
Total capital ratio	14.8%	14.6%
Leverage ratio	4.3%	4.4%
Leverage ratio exposure (billions)	\$ 1,521.2	\$ 1,450.8

(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.

(2) In fiscal 2018, amounts included CVA scalars of 80%, 83% and 86%, respectively.

## 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,  
Bridgwater 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.

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

Trademarks used in this report include the LION & GLOBE Symbol, ROYAL BANK OF CANADA, RBC and RBC INSURANCE which are trademarks of Royal Bank of Canada used by Royal Bank of Canada and/or by its subsidiaries under license. All other trademarks mentioned in this report, which are not the property of Royal Bank of Canada, are owned by their respective holders.

### 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  
155 Wellington Street West  
Toronto, Ontario M5V 3K7  
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 RBC 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 2019

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 24 April 25 July 25 October 24	February 22 May 24 August 23 November 22
Preferred shares series C-2 (US\$)	January 28 April 26 July 26 October 28	February 7 May 7 August 7 November 7

### 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.

### 2019 Quarterly earnings release dates

First quarter	February 22
Second quarter	May 23
Third quarter	August 21
Fourth quarter	December 4