Royal Bank of Canada |
Second Quarter 2018

Royal Bank of Canada second quarter 2018 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. Effective November 1, 2017, we adopted IFRS 9 *Financial Instruments*. Prior period amounts are prepared in accordance with IAS 39 *Financial Instruments: Recognition and Measurement*.

Net Income	Diluted EPS	ROE	CET1 Ratio
$3.1 Billion	$2.06	18.1%	10.9%
Strong earnings growth of 9% YoY	*Double-digit growth of 11% YoY*	*Balanced capital deployment for premium ROE*	*$224 million of share repurchases in Q2 2018*

TORONTO, May 24, 2018 – Royal Bank of Canada (RY on TSX and NYSE) today reported net income of $3,060 million for the second quarter ended April 30, 2018, up $251 million or 9% from the prior year with double-digit diluted EPS(1) growth of 11%. Results reflect strong earnings growth in Wealth Management, Personal & Commercial Banking, and Investor & Treasury Services, and solid earnings in Insurance. Capital Markets performance was stable amidst less favourable market conditions. Strong credit quality also contributed to results, with provision for credit losses (PCL) on impaired loans ratio of 22 basis points (bps) reflecting a benign credit environment.

Compared to last quarter, net income was up $48 million or 2%, though market-related revenue moderated from strong first quarter levels. Continued margin expansion and strong loan growth on both sides of the border helped to offset the impact of a less favourable market environment and fewer days in the current quarter. The prior quarter also included the write-down of net deferred tax assets related to the U.S. Tax Reform(2).

"We maintained good momentum in the second quarter, delivering earnings of $3.1 billion. Our businesses executed on client-focused growth strategies while continuing to demonstrate strong risk management. As we transform the bank to create more value for our clients, we're proud to once again be ranked highest in overall customer satisfaction by J.D. Power."

– Dave McKay, RBC President and Chief Executive Officer

Q2 2018 compared to Q2 2017	• Net income of $3,060 million	↑ 9%		
	• Diluted EPS of $2.06	↑ 11%		
	• ROE(3) of 18.1%	↑ 90 bps		
	• CET1(4) ratio of 10.9%	↑ 30 bps		
Q2 2018 compared to Q1 2018	• Net income of $3,060 million	↑ 2%		
	• Diluted EPS of $2.06	↑ 2%		
	• ROE of 18.1%	↑ 70 bps		
	• CET1 ratio of 10.9%	↓ 10 bps		
YTD 2018 compared to YTD 2017			**Excluding specified item(5):**	
	• Net income of $6,072 million	↑ 4%	• Net income of $6,072 million	↑ 8%
	• Diluted EPS of $4.07	↑ 7%	• Diluted EPS of $4.07	↑ 11%
	• ROE of 17.7%	→ 0 bps	• ROE of 17.7%	↑ 70 bps

(1) Earnings per share (EPS).
(2) In December 2017, the U.S. H.R. 1 (U.S. Tax Reform) was passed into law.
(3) 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 2018 Report to Shareholders.
(4) Common Equity Tier 1 (CET1) ratio.
(5) The specified item reflects our share of a gain related to the sale of the U.S. operations of Moneris Solutions Corporation (Moneris) to Vantiv, Inc., which was $212 million (before- and after-tax). Results and measures excluding the specified item are non-GAAP measures. For further information, including a reconciliation, refer to the Key performance and non-GAAP measures section of this Q2 2018 Report to Shareholders.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the three and six month periods ended or as at April 30, 2018, compared to the corresponding periods in the prior fiscal year and the three month period ended January 31, 2018. This MD&A should be read in conjunction with our unaudited Interim Condensed Consolidated Financial Statements for the quarter ended April 30, 2018 (Condensed Financial Statements) and related notes and our 2017 Annual Report. This MD&A is dated May 23, 2018. 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 2017 Annual Information Form, is available free of charge on our website at rbc.com/investorrelations, on the Canadian Securities Administrators' website at sedar.com and on the EDGAR section of the United States (U.S.) Securities and Exchange Commission's (SEC) website at sec.gov.

Information contained in or otherwise accessible through the websites mentioned 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 2018 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, the Strategic priorities and Outlook sections for each of our business segments, 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 risks sections of our 2017 Annual Report and the Risk management section of this Q2 2018 Report to Shareholders; including global uncertainty and volatility, elevated Canadian housing prices and household indebtedness, information technology and cyber risk, including the risk of cyber-attacks or other information security events at or impacting our service providers or other third parties with whom we interact, regulatory change, technological innovation and non-traditional competitors, global environmental policy and climate change, changes in consumer behaviour, the end of quantitative easing, 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 2018 Report to Shareholders are set out in the Overview and outlook section and for each business segment under the Strategic priorities and Outlook headings in our 2017 Annual Report, as updated by the Overview and outlook section of this Q2 2018 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 2017 Annual Report and the Risk management section of this Q2 2018 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 81,000+ employees who bring our vision, values and strategy to life so we can help our clients thrive and communities prosper. As Canada's biggest bank, and one of the largest in the world based on market capitalization, we have a diversified business model with a focus on innovation and providing exceptional experiences to our 16 million clients in Canada, the U.S. and 34 other countries. Learn more at rbc.com.

Selected financial and other highlights

	As at or for the three months ended			As at or for the six months ended	
(Millions of Canadian dollars, except per share, number of and percentage amounts) (1)	**April 30 2018**	January 31 2018	April 30 2017	**April 30 2018**	April 30 2017
Total revenue (2)	**$ 10,054**	$ 10,828	$ 10,412	**$ 20,882**	$ 20,058
Provision for credit losses (PCL) (3)	**274**	334	302	**608**	596
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	**421**	836	1,090	**1,257**	1,273
Non-interest expense (2)	**5,482**	5,611	5,331	**11,093**	10,646
Income before income taxes	**3,877**	4,047	3,689	**7,924**	7,543
Net income	**$ 3,060**	$ 3,012	$ 2,809	**$ 6,072**	$ 5,836
Segments – net income					
Personal & Commercial Banking	**$ 1,459**	$ 1,521	$ 1,360	**$ 2,980**	$ 2,952
Wealth Management	**537**	597	431	**1,134**	861
Insurance	**172**	127	166	**299**	300
Investor & Treasury Services	**212**	219	193	**431**	407
Capital Markets	**665**	748	668	**1,413**	1,330
Corporate Support	**15**	(200)	(9)	**(185)**	(14)
Net income	**$ 3,060**	$ 3,012	$ 2,809	**$ 6,072**	$ 5,836
Selected information					
Earnings per share (EPS) – basic	**$ 2.06**	$ 2.02	$ 1.86	**$ 4.08**	$ 3.84
– diluted	**2.06**	2.01	1.85	**4.07**	3.82
Return on common equity (ROE) (4), (5)	**18.1%**	17.4%	17.2%	**17.7%**	17.7%
Average common equity (4)	**$ 67,450**	$ 66,850	$ 64,800	**$ 67,150**	$ 64,700
Net interest margin (NIM) – on average earning assets (4)	**1.68%**	1.65%	1.73%	**1.66%**	1.73%
PCL as a % of average net loans and acceptances (6)	**0.20%**	0.24%	0.23%	**0.22%**	0.22%
PCL on impaired loans as a % of average net loans and acceptances (6)	**0.22%**	0.23%	0.23%	**0.23%**	0.22%
Gross impaired loans (GIL) as a % of loans and acceptances (7), (8)	**0.47%**	0.45%	0.59%	**0.47%**	0.59%
Liquidity coverage ratio (LCR) (9)	**122%**	122%	123%	**122%**	123%
Capital ratios and Leverage ratio (10)					
Common Equity Tier 1 (CET1) ratio	**10.9%**	11.0%	10.6%	**10.9%**	10.6%
Tier 1 capital ratio	**12.3%**	12.4%	12.0%	**12.3%**	12.0%
Total capital ratio	**14.1%**	14.4%	14.1%	**14.1%**	14.1%
Leverage ratio	**4.3%**	4.2%	4.3%	**4.3%**	4.3%
Selected balance sheet and other information (11)					
Total assets	**$ 1,274,778**	$ 1,276,275	$ 1,202,919	**$ 1,274,778**	$ 1,202,919
Securities, net of applicable allowance	**220,841**	222,262	219,405	**220,841**	219,405
Loans, net of allowance for loan losses	**551,393**	538,044	532,262	**551,393**	532,262
Derivative related assets	**94,175**	105,512	100,763	**94,175**	100,763
Deposits	**822,048**	800,020	785,583	**822,048**	785,583
Common equity	**69,122**	66,430	65,858	**69,122**	65,858
Total capital risk-weighted assets	**489,172**	466,758	471,176	**489,172**	471,176
Assets under management (AUM)	**660,900**	656,700	614,600	**660,900**	614,600
Assets under administration (AUA) (12)	**5,666,400**	5,653,500	5,314,500	**5,666,400**	5,314,500
Common share information					
Shares outstanding (000s) – average basic	**1,443,084**	1,451,781	1,468,015	**1,447,504**	1,476,273
– average diluted	**1,449,737**	1,458,714	1,475,562	**1,454,299**	1,484,332
– end of period	**1,442,009**	1,444,065	1,457,291	**1,442,009**	1,457,291
Dividends declared per common share	**$ 0.94**	$ 0.91	$ 0.87	**$ 1.85**	$ 1.70
Dividend yield (13)	**3.7%**	3.5%	3.6%	**3.6%**	3.7%
Common share price (RY on TSX) (14)	**$ 97.64**	$ 105.32	$ 93.47	**$ 97.64**	$ 93.47
Market capitalization (TSX) (14)	**140,798**	152,089	136,213	**140,798**	136,213
Business information (number of)					
Employees (full-time equivalent) (FTE)	**79,308**	78,648	77,658	**79,308**	77,658
Bank branches	**1,355**	1,368	1,401	**1,355**	1,401
Automated teller machines (ATMs)	**4,875**	4,660	4,893	**4,875**	4,893
Period average US$ equivalent of C$1.00 (15)	**$ 0.778**	$ 0.794	$ 0.746	**$ 0.786**	$ 0.749
Period-end US$ equivalent of C$1.00	**$ 0.779**	$ 0.813	$ 0.733	**$ 0.779**	$ 0.733

(1) Effective November 1, 2017, we adopted IFRS 9 *Financial Instruments*. Results from periods prior to November 1, 2017 are reported in accordance with IAS 39 *Financial Instruments: Recognition and Measurement* in this Q2 2018 Report to Shareholders. For further details on the impacts of the adoption of IFRS 9 including the description of accounting policies selected, refer to Note 2 of our Condensed Financial Statements.
(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(3) 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 fair value through profit or loss (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). Refer to the Credit risk section and Note 2 of our Condensed Financial Statements for further details.
(4) 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.
(5) 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.
(6) PCL represents PCL on loans, acceptances and commitments. PCL on impaired loans represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39. Stage 3 PCL under IFRS 9 is comprised of lifetime credit losses of credit-impaired loans, acceptances and commitments.
(7) Effective November 1, 2017, GIL excludes $229 million of acquired credit-impaired (ACI) loans related to our acquisition of City National Bank (City National) that have returned to performing status. As at April 30, 2018, $21 million (January 31, 2018 – $24 million) of ACI loans that remain impaired are included in GIL. As at April 30, 2017, GIL includes $331 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 6 bps to our April 30, 2017 GIL ratio. For further details, refer to Note 5 of our Condensed Financial Statements.
(8) Effective November 1, 2017, the definition of gross impaired loans has been shortened for certain products to align with a definition of default of 90 days past due under IFRS 9, resulting in an increase in GIL of $134 million.
(9) LCR is calculated using the Basel III Liquidity Adequacy Requirements (LAR) guideline. For further details, refer to the Liquidity and funding risk section.
(10) Capital and Leverage ratios presented above are on an "all-in" basis. The Leverage ratio is a regulatory measure under the Basel III framework. For further details, refer to the Capital management section.
(11) Represents period-end spot balances.
(12) AUA includes $17.8 billion and $9.1 billion (January 31, 2018 – $18.2 billion and $9.1 billion; April 30, 2017 – $18.9 billion and $9.8 billion) of securitized residential mortgages and credit card loans, respectively.
(13) Defined as dividends per common share divided by the average of the high and low share price in the relevant period.
(14) Based on TSX closing market price at period-end.
(15) Average amounts are calculated using month-end spot rates for the period.

Economic, market and regulatory review and outlook – data as at May 23, 2018

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 at an estimated rate of 1.8%[1] during the first calendar quarter of 2018, which is slightly above the previous calendar quarter. April's unemployment rate remained steady at 5.8%, compared to January's rate of 5.9%, reflecting its lowest level since 1974. Interest rate hikes and recent regulatory changes to mortgage qualifications have weighed on consumer spending and housing, though the former is expected to strengthen somewhat amid low unemployment, wage growth, and steady job gains. In April, the Bank of Canada (BoC) held its interest rate at 1.25% in light of a number of headwinds, including competitiveness challenges, uncertainty surrounding the North American Free Trade Agreement (NAFTA) negotiations and high household debt. However, we expect the BoC to continue gradually tightening monetary policy with two more rate hikes in the second half of calendar 2018, as inflation has reached its target rate of 2% and the economy is expected to expand in the second calendar quarter. Despite higher interest rates and tighter labour markets conditions, we still expect the Canadian economy to continue to grow for the remainder of calendar 2018, however at a more moderate pace in comparison to calendar 2017.

U.S.

The U.S. economy grew by 2.3%[1] in the first calendar quarter of 2018, compared to 2.9%[1] in the previous calendar quarter, as consumer spending grew at its weakest pace in nearly five years. However, we expect the growth rate to rebound in the next quarter, driven by a healthy labour market and strong business and consumer confidence. With the expectation of continued growth, rising inflation and an uplift from fiscal stimulus, including the U.S. Tax Reform, we expect the Federal Reserve (Fed) to continue to raise interest rates.

Europe

The Euro area grew at a rate of 0.4% in the first calendar quarter of 2018, compared to 0.7% in the previous quarter. Labour markets continued to improve in the first calendar quarter of 2018 and the unemployment rate reached a 9-year low in March 2018. Though economic conditions continue to improve, the inflation rate remains low. We expect the European Central Bank to reduce its asset purchase program toward the end of the calendar year.

Financial markets

The economic impact of rising interest rates and inflationary concerns has triggered equity markets to fall from their earlier peaks, following a year of strong performance and unusually low volatility. Conversely, bond yields have risen over the past few months reflecting a rising inflationary premium and the anticipation of higher borrowing costs from a number of central banks. However, both the BoC and the Fed held their rates steady in their most recent announcements. With inflation trending upward and a strong economic backdrop, we expect the pause to be temporary, as noted above.

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 adverse business or financial impacts to the extent practicable. Such impacts could result from new or amended laws or regulations and the expectations of those who enforce them. The following provides a high-level summary of some of the key regulatory changes that have the potential to increase our operational, compliance, and technology costs and to impact our profitability, as well as to potentially increase the cost and complexity of our operations.

Negotiations on North American Free Trade Agreement (NAFTA)

Canada, Mexico and the U.S. remain engaged in negotiations on potential changes to NAFTA. The existing chapters in NAFTA, such as those relating to financial services, cross-border trade, and temporary entry rules, could be changed as a result of these discussions. Negotiating parties continue to debate a number of competing priorities and the outcome remains unclear. Changes to NAFTA may adversely affect certain of our businesses, either directly or indirectly, as a result of adverse effects on segments of the Canadian and U.S. economies.

Consumer Protection

The Canadian federal government is exploring a number of issues relating to consumer protection. For example, Canadian regulatory agencies have undertaken reviews of sales practices at Canadian banks and of provincial consumer protection rules. On March 20, 2018, the Financial Consumer Agency of Canada (FCAC) released a report on its review of sales practices. While no widespread misconduct was identified, several areas for improvement were noted. As part of the 2018 budget announcement in February 2018, the federal government also announced their intention to introduce legislation that would further strengthen the mandate of FCAC in a continuing effort to advance the rights and interests of consumers when dealing with banks.

United States Tax Reform

In December 2017, the U.S. H.R. 1 (U.S. Tax Reform) was passed into law. The resulting changes to the U.S. Internal Revenue Code include: a reduction in the corporate income tax rate from 35% to 21%, limits on the deductibility of net interest expense, a new Base

1 Annualized rate

Erosion Anti-abuse Tax, a prohibition on deducting FDIC premium fees and entertainment expenses, and authorization of immediate expensing of many capital expenditures. As applicable to us, the reduced corporate tax rate was phased in beginning January 1, 2018. Various effective dates apply to the other provisions. Current tax expense also reflects the reduced tax rate prorated for the year. Predicting the impact of other U.S. Tax Reform measures is uncertain because elements of the U.S. Tax Reform are subject to guidance to be provided by the U.S. Treasury Department.

United States Regulatory Initiatives

Policymakers are considering reforms to various U.S. regulations, certain of which may, if implemented, result in reduced complexity of the U.S. regulatory framework and lower compliance costs. These include possible reforms to the Volcker Rule; the Department of Labor fiduciary rule for brokers and advisors; the SEC's proposed standards of conduct for brokers and advisors (i.e. Regulation Best Interest); the regulation of over-the-counter (OTC) derivatives; and key aspects of the capital, leverage, liquidity, and oversight framework in the U.S. (e.g. enhanced prudential standards applicable to foreign bank organizations; the Fed's Comprehensive Capital Analysis and Review (CCAR) program; and total loss absorbing capacity rules). These initiatives may lead to financial regulatory reforms, the extent, timing, and impact of which are unknown at this time.

U.K. and European Regulatory Reform

The U.K. is in negotiations to exit the European Union. Until those negotiations are concluded, and the resulting changes are implemented, the U.K. will remain a European Union Member State, subject to all European Union legislation.

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 2017 Annual Report and the Capital, liquidity and other regulatory developments section of this Q2 2018 Report to Shareholders. For further details on our framework and activities to manage risks, refer to the risk and Capital management sections of our 2017 Annual Report and the Risk management and Capital management sections of this Q2 2018 Report to Shareholders.

Financial performance

Overview

Q2 2018 vs. Q2 2017

Net income of $3,060 million was up $251 million or 9% from a year ago. Diluted earnings per share (EPS) of $2.06 was up $0.21 or 11% and return on common equity (ROE) of 18.1% was up 90 bps from 17.2% last year. Our Common Equity Tier 1 (CET1) ratio of 10.9% was up 30 bps from a year ago.

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

Wealth Management earnings increased largely reflecting higher average fee-based assets, an increase in net interest income, and a lower effective tax rate reflecting benefits from the U.S. Tax Reform. Lower PCL also contributed to the increase. These factors were partially offset by higher variable compensation on improved results, increased costs in support of business growth, and higher regulatory costs in the U.S.

Personal & Commercial Banking earnings were up reflecting improved spreads and average volume growth of 5%. These factors were partially offset by higher staff-related and marketing costs and higher PCL.

Investor & Treasury Services results increased primarily due to higher revenue from our asset services business, improved margins and growth in client deposits. These factors were partially offset by lower funding and liquidity revenue and higher investment in client-focused technology initiatives.

Insurance earnings were higher primarily reflecting favourable investment-related experience, partially offset by higher claims volumes in both life retrocession and disability portfolios, and increased costs related to business growth and strategic initiatives.

Capital Markets earnings were down due to lower revenue in Global Markets and Corporate and Investment Banking and the impact of foreign exchange translation. These factors were largely offset by a lower effective tax rate reflecting changes in earnings mix and the benefits from the U.S. Tax Reform, and lower PCL.

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

Q2 2018 vs. Q1 2018

Net income of $3,060 million was up $48 million or 2% from the prior quarter. Diluted EPS of $2.06 was up $0.05 or 2% and ROE of 18.1% was up 70 bps. Our CET1 ratio of 10.9% was down 10 bps.

Our results reflected higher earnings mainly due to the write-down of net deferred tax assets associated with the U.S. Tax Reform in Corporate Support in the prior quarter, and higher earnings in Insurance. This was partially offset by lower earnings in Capital Markets, Personal & Commercial Banking, Wealth Management, and Investor & Treasury Services.

Insurance earnings increased largely reflecting favourable investment-related experience and lower disability claims volumes.

Capital Markets earnings were lower largely driven by lower equity originations mainly in North America reflecting lower market activity, and decreased fixed income trading revenue across all regions. Lower equity trading revenue in the U.S. also contributed to the decrease. These factors were partially offset by lower variable compensation on decreased results, lower PCL, higher municipal banking activity and the impact of foreign exchange translation.

Personal & Commercial Banking earnings were down reflecting three less days in the quarter, partially offset by higher spreads and lower staff-related costs in Canadian Banking. The prior quarter also included a gain related to the reorganization of Interac.

Wealth Management earnings decreased reflecting lower transaction revenue, a net change in the fair value of our U.S. share-based compensation plan, and lower performance fees. A favourable accounting adjustment related to City National in the prior period also contributed to the decrease. These factors were partially offset by lower PCL and higher net interest income due to higher interest rates and volume growth.

Investor & Treasury Services earnings were down due to decreased funding and liquidity revenue, partially offset by increased revenue from our asset services business driven by higher client activity and market volatility, and improved margins.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income of $6,072 million increased $236 million or 4% from a year ago. Six month diluted EPS of $4.07 was up $0.25 or 7% and ROE of 17.7% was flat.

Excluding our share of the gain related to the sale of the U.S. operations of Moneris, which was a specified item in the prior year as described below, net income increased $448 million or 8% from the prior year, diluted EPS was up $0.39 or 11%, and ROE of 17.7% increased 70 bps. Our results reflected increased earnings in Wealth Management, Personal & Commercial Banking, Capital Markets, and Investor & Treasury Services, partially offset by the write-down of net deferred tax assets associated with the U.S. Tax Reform in Corporate Support in the current year. Insurance earnings remained relatively unchanged from the prior year.

Wealth Management earnings increased primarily reflecting higher average fee-based assets, an increase in net interest income, and a lower effective tax rate reflecting benefits from the U.S. Tax Reform. Lower PCL also contributed to the increase. These factors were partially offset by higher variable compensation on improved results, higher costs in support of business growth, and the impact of foreign exchange translation.

Personal & Commercial Banking earnings were up mainly due to average volume growth of 5% and higher spreads, card service revenue and mutual fund distribution fees. These factors were partially offset by our share of the gain related to the sale of the U.S. operations of Moneris in the prior year, higher PCL, higher staff-related costs and increased costs in support of business growth.

Capital Markets results were up driven by a lower effective tax rate reflecting changes in earnings mix and the benefits from the U.S. Tax Reform, higher revenue in Corporate and Investment Banking and lower PCL. These factors were partially offset by higher costs related to changes in the timing of deferred compensation, increased regulatory and compliance costs, and the impact of foreign exchange translation.

Investor & Treasury Services results increased largely due to increased revenue from our asset services business, growth in client deposits and improved margins. These factors were partially offset by higher investment in client-focused technology initiatives and lower funding and liquidity revenue.

Insurance earnings remained relatively unchanged from the prior year as the impact of favourable investment-related experience was more than offset by higher claims volumes in both life retrocession and disability portfolios and favourable updates in the prior year related to premium and mortality experience.

Results excluding the specified item are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

Impact of foreign currency translation

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

	For the three months ended		For the six months ended
(Millions of Canadian dollars, except per share amounts)	**Q2 2018 vs. Q2 2017** (1)	**Q2 2018 vs. Q1 2018**	**Q2 2018 vs. Q2 2017** (1)
Increase (decrease):			
Total revenue	**$ (68)**	**$ 78**	**$ (182)**
PCL	**3**	**–**	**4**
PBCAE	**–**	**–**	**–**
Non-interest expense	**(45)**	**54**	**(123)**
Income taxes	**(1)**	**3**	**(16)**
Net income	**(25)**	**21**	**(47)**
Impact on EPS			
Basic	**$ (0.02)**	**$ 0.01**	**$ (0.03)**
Diluted	**(0.02)**	**0.01**	**(0.03)**

(1) Effective November 1, 2017, we adopted IFRS 9 *Financial Instruments*. Results from periods prior to November 1, 2017 are reported in accordance with IAS 39 *Financial Instruments: Recognition and Measurement*. For further details on the impacts of the adoption of IFRS 9 including the description of accounting policies selected, refer to Note 2 of our Condensed Financial Statements.

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

	For the three months ended			For the six months ended	
(Average foreign currency equivalent of C$1.00) (1)	**April 30 2018**	January 31 2018	April 30 2017	**April 30 2018**	April 30 2017
U.S. dollar	**0.778**	0.794	0.746	**0.786**	0.749
British pound	**0.562**	0.578	0.590	**0.570**	0.597
Euro	**0.638**	0.656	0.696	**0.647**	0.701

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

Total revenue

	For the three months ended			For the six months ended	
(Millions of Canadian dollars)	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Interest income	$ 7,865	$ 7,540	$ 6,491	$ 15,405	$ 12,950
Interest expense	3,444	3,095	2,293	6,539	4,428
Net interest income	$ 4,421	$ 4,445	$ 4,198	$ 8,866	$ 8,522
NIM	1.68%	1.65%	1.73%	1.66%	1.73%
Insurance premiums, investment and fee income	$ 806	$ 1,144	$ 1,448	$ 1,950	$ 1,945
Trading revenue	236	318	181	554	444
Investment management and custodial fees	1,318	1,325	1,189	2,643	2,348
Mutual fund revenue	862	885	820	1,747	1,634
Securities brokerage commissions	334	355	360	689	759
Service charges	443	440	437	883	875
Underwriting and other advisory fees	457	541	590	998	1,058
Foreign exchange revenue, other than trading	277	281	236	558	463
Card service revenue	267	257	241	524	477
Credit fees	317	328	358	645	714
Net gains on investment securities (1)	49	39	54	88	81
Share of profit in joint ventures and associates	14	25	41	39	292
Other	253	445	259	698	446
Non-interest income (2)	$ 5,633	$ 6,383	$ 6,214	$ 12,016	$ 11,536
Total revenue (2)	$ 10,054	$ 10,828	$ 10,412	$ 20,882	$ 20,058
Additional information					
Total trading revenue					
Net interest income	$ 524	$ 550	$ 631	$ 1,074	$ 1,300
Non-interest income	236	318	181	554	444
Total trading revenue	$ 760	$ 868	$ 812	$ 1,628	$ 1,744

(1) Under IFRS 9, the Net gains on investment securities represents realized gains (losses) on debt securities at FVOCI and debt securities at amortized cost. Under IAS 39, the Net gains on investment securities represents realized gains (losses) on debt and equity available-for-sale securities.

(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.

Q2 2018 vs. Q2 2017

Total revenue decreased $358 million or 3% from last year mainly due to lower insurance revenue, decreased underwriting and other advisory revenue, and the impact of foreign exchange translation which decreased our total revenue by $68 million. These factors were partially offset by higher net interest income and increased investment management and custodial fees.

Net interest income increased $223 million or 5%, largely due to the impact from higher interest rates and volume growth in Canadian Banking and Wealth Management. These factors were partially offset by lower fixed income trading revenue mainly in the U.S. and lower funding and liquidity revenue.

NIM was down 5 bps compared to last year due to volume growth in average earning assets primarily in reverse repos and the impact of competitive pricing pressures, partially offset by improved spreads on deposits in Canadian Banking and Wealth Management, reflecting the rising interest rate environment.

Insurance premiums, investment and fee income (insurance revenue) decreased $642 million, mainly reflecting the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE.

Investment management and custodial fees increased $129 million or 11%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales.

Underwriting and other advisory fees decreased $133 million or 23%, primarily due to lower equity and debt origination activity largely in North America, and decreased M&A activity in the U.S.

Q2 2018 vs. Q1 2018

Total revenue decreased $774 million or 7% from the prior quarter, primarily due to lower insurance revenue reflecting the change in the fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE, and the change in the fair value of the hedge related to our U.S. share-based compensation plan, which was largely offset in Non-interest expense. Lower equity originations in North America reflecting lower market activity, decreased fixed income trading revenue across all regions, and lower equity trading revenue in the U.S. also contributed to the decrease. The prior period also included a favourable accounting adjustment related to City National. These factors were partially offset by the impact of foreign exchange translation which increased our total revenue by $78 million.

Q2 2018 vs. Q2 2017 (Six months ended)

Total revenue increased $824 million or 4%. Excluding our share of the gain related to the sale of the U.S. operations of Moneris of $212 million, total revenue increased $1,036 million or 5%, primarily reflecting volume growth and the impact of higher interest rates in Canadian Banking and Wealth Management, and increased average fee-based assets reflecting net sales and capital appreciation. Net gains in our other non-trading portfolios and higher balances driving higher mutual fund distribution fees in Canadian Banking also contributed to the increase. These factors were partially offset by the change in the fair value of the hedge related to our U.S. share-based compensation plan, which was largely offset in Non-interest expense, and lower fixed income trading revenue largely in Europe. In addition, foreign exchange translation decreased revenue by $182 million.

Results excluding the specified item are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

Provision for credit losses (PCL)
Q2 2018 vs. Q2 2017
Total PCL in Q2 2018 was $274 million.

PCL on loans of $278 million decreased $24 million, or 8% from the prior year, mainly due to lower provisions in Wealth Management and Capital Markets, partially offset by higher provisions in Personal & Commercial Banking. PCL ratio on loans of 20 bps improved 3 bps.

Q2 2018 vs. Q1 2018
Total PCL decreased $60 million from the prior quarter.

PCL on loans of $278 million decreased $56 million, or 17% from the prior quarter, mainly due to lower provisions in Capital Markets and Wealth Management. PCL ratio on loans improved 4 bps.

Q2 2018 vs. Q2 2017 (Six months ended)
Total PCL increased $12 million from the prior year.

PCL on loans increased $16 million, or 3% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management and Capital Markets. PCL ratio on loans remained flat.

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

Insurance policyholder benefits, claims and acquisition expense (PBCAE)
Q2 2018 vs. Q2 2017
PBCAE decreased $669 million or 61% from a year ago, primarily due to the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue, and favourable investment-related experience. These factors were partially offset by higher claims volumes in both life retrocession and disability portfolios.

Q2 2018 vs. Q1 2018
PBCAE decreased $415 million or 50% from the prior quarter, mainly due to the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue. Favourable investment-related experience also contributed to the decrease.

Q2 2018 vs. Q2 2017 (Six months ended)
PBCAE decreased $16 million or 1% from the prior year, mainly reflecting favourable investment-related experience, and the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue. These factors were largely offset by the impact of restructured international life contracts in the prior year, largely offset in revenue, higher claims volumes in both life retrocession and disability portfolios, and favourable updates in the prior year related to premium and mortality experience. Business growth in the current year also partially offset the decrease.

Non-interest expense

	For the three months ended			For the six months ended	
(Millions of Canadian dollars, except percentage amounts) (1)	**April 30 2018**	January 31 2018	April 30 2017	**April 30 2018**	April 30 2017
Salaries	**$ 1,482**	$ 1,466	$ 1,449	**$ 2,948**	$ 2,890
Variable compensation	**1,338**	1,384	1,277	**2,722**	2,538
Benefits and retention compensation	**465**	480	465	**945**	933
Share-based compensation	**39**	172	98	**211**	237
Human resources	**$ 3,324**	$ 3,502	$ 3,289	**$ 6,826**	$ 6,598
Equipment	**386**	372	344	**758**	700
Occupancy	**386**	379	404	**765**	803
Communications	**249**	224	241	**473**	462
Professional fees	**321**	281	265	**602**	520
Amortization of other intangibles	**266**	261	251	**527**	503
Other	**550**	592	537	**1,142**	1,060
Non-interest expense	**$ 5,482**	$ 5,611	$ 5,331	**$ 11,093**	$ 10,646
Efficiency ratio (2)	**54.5%**	51.8%	51.2%	**53.1%**	53.1%
Efficiency ratio adjusted (3)	**53.6%**	51.9%	53.1%	**52.7%**	53.3%

(1) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(2) Efficiency ratio is calculated as non-interest expense divided by total revenue.
(3) Measures have been adjusted by excluding the change in fair value of investments backing our policyholder liabilities and our share of the Q1 2017 gain related to the sale of the U.S. operations of Moneris of $212 million (before- and after-tax). These are non-GAAP measures. For further details, refer to the Key performance and non-GAAP measures section.

Q2 2018 vs. Q2 2017
Non-interest expense increased $151 million or 3%, due to increased staff-related costs, including higher variable compensation on improved results and higher costs related to changes in the timing of deferred compensation, and higher costs in support of business growth. Higher regulatory and compliance costs and higher marketing costs also contributed to the increase. These factors were partially offset by the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, lower legal costs, and the impact of foreign exchange translation of $45 million.

Our efficiency ratio of 54.5% increased 330 bps from 51.2% last year. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.6% increased 50 bps from 53.1% last year primarily due to higher staff-related costs and costs in support of business growth, partially offset by higher revenue across most businesses.

Q2 2018 vs. Q1 2018
Non-interest expense decreased $129 million or 2%, mainly due to the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, and lower variable compensation on lower results, partially offset by the impact of foreign exchange translation of $54 million.

Our efficiency ratio of 54.5% increased 270 bps from 51.8% last quarter. Excluding the change in fair value of investments backing our policyholder liabilities, our efficiency ratio of 53.6% increased 170 bps from last quarter, primarily due to lower revenue across most businesses, partially offset by decreased variable compensation on lower results.

Q2 2018 vs. Q2 2017 (Six months ended)
Non-interest expense increased $447 million or 4%, primarily attributable to higher staff-related costs, including higher variable compensation on improved results and higher costs related to changes in the timing of deferred compensation, and higher costs in support of business growth. Higher regulatory and compliance costs and higher marketing costs also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation of $123 million and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue.

Our efficiency ratio of 53.1% remained flat. Excluding the change in fair value of investments backing our policyholder liabilities and our share of the gain recorded in the prior year related to the sale of the U.S. operations of Moneris noted previously, our efficiency ratio of 52.7% decreased 60 bps from last year, primarily due to solid revenue growth across most businesses, partially offset by increased staff-related costs and costs in support of business growth as noted above.

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

Income taxes

	For the three months ended			For the six months ended	
(Millions of Canadian dollars, except percentage amounts)	**April 30 2018**	January 31 2018	April 30 2017	**April 30 2018**	April 30 2017
Income taxes	**$ 817**	$ 1,035	$ 880	**$ 1,852**	$ 1,707
Income before income taxes	**$ 3,877**	$ 4,047	$ 3,689	**$ 7,924**	$ 7,543
Canadian statutory income tax rate (1)	**26.5%**	26.5%	26.5%	**26.5%**	26.5%
Lower average tax rate applicable to subsidiaries (2)	**(4.3)%**	(3.2)%	(1.9)%	**(3.7)%**	(2.7)%
Tax-exempt income from securities	**(1.8)%**	(1.6)%	(2.1)%	**(1.7)%**	(2.1)%
Tax rate change (3)	**–%**	3.6%	–%	**1.9%**	(0.1)%
Other	**0.7%**	0.3%	1.4%	**0.4%**	1.0%
Effective income tax rate	**21.1%**	25.6%	23.9%	**23.4%**	22.6%

(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 includes the fiscal 2018 blended rate for U.S. subsidiaries.
(3) For the three months ended January 31, 2018, the Tax rate change is primarily related to the impact of the U.S. Tax Reform.

Q2 2018 vs. Q2 2017
Income tax expense decreased $63 million or 7% from last year, and the effective income tax rate of 21.1% decreased 280 bps, primarily due to the impact of the U.S. Tax Reform which resulted in a lower corporate tax rate on U.S. earnings, higher favourable tax adjustments in the current quarter, and changes in earnings mix.

Q2 2018 vs. Q1 2018
Income tax expense decreased $218 million or 21% from last quarter, and the effective income tax rate of 21.1% decreased 450 bps, as the prior quarter included the write-down of net deferred tax assets related to the U.S. Tax Reform. Higher favourable tax adjustments in the current quarter also contributed to the decrease.

Q2 2018 vs. Q2 2017 (Six months ended)
Income tax expense increased $145 million or 8% from last year, due to higher income before income taxes and the impact of the U.S. Tax Reform which resulted in the write-down of net deferred tax assets partially offset by the lower corporate tax rate on U.S. earnings.

The effective income tax rate of 23.4% increased 80 bps, primarily due to our share of a gain related to the sale of our U.S. operations of Moneris of $212 million (before- and after-tax) in the prior year. Excluding our share of the gain, the effective tax rate increased 10 bps, largely due to the net impact of the U.S. Tax Reform, as noted previously, partially offset by more favourable tax adjustments in the current year.

The effective income tax rate excluding the specified item above is a non-GAAP measure. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

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, 2017, except as noted below.

Provisions for credit losses
On November 1, 2017, we adopted IFRS 9, which introduced an expected credit loss impairment model that differs from the incurred loss model under IAS 39. PCL is recorded to recognize estimated credit losses on all financial assets, except for financial assets classified or designated as fair value through profit or loss (FVTPL) and equity securities designated as fair value through other comprehensive income (FVOCI), which are not subject to impairment assessment. For details on our accounting policy on Allowance for credit losses, refer to Note 2 of our Condensed Financial Statements.

PCL is included in the results of each business segment to fully reflect the appropriate expenses related to the conduct of each business segment. Prior to the adoption of IFRS 9, PCL on loans not yet identified as impaired was included in Corporate Support.

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 2017 Annual Report.

Key performance and non-GAAP measures

Performance measures

Return on common equity (ROE)
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 2017 Annual Report.

The following table provides a summary of our ROE calculations:

	For the three months ended								
	April 30 2018							January 31 2018	April 30 2017
(Millions of Canadian dollars, except percentage amounts)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	$ 1,435	$ 522	$ 170	$ 208	$ 644	$ –	$ 2,979	$ 2,929	$ 2,724
Total average common equity (1), (2)	21,200	13,600	1,950	3,050	19,700	7,950	67,450	66,850	64,800
ROE (3)	27.8%	15.8%	36.3%	28.1%	13.4%	n.m.	18.1%	17.4%	17.2%

	For the six months ended							
	April 30 2018							April 30 2017
(Millions of Canadian dollars, except percentage amounts)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income available to common shareholders	$ 2,932	$ 1,105	$ 295	$ 424	$ 1,371	$ (219)	$ 5,908	$ 5,664
Total average common equity (1), (2)	20,950	13,500	1,850	3,100	19,650	8,100	67,150	64,700
ROE (3)	28.2%	16.5%	32.3%	27.5%	14.1%	n.m.	17.7%	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, 2018 with the corresponding periods in the prior year and the three months ended January 31, 2018 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 following table provides a summary of our Economic profit:

	For the three months ended								
	April 30 2018							January 31 2018	April 30 2017
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income	$ 1,459	$ 537	$ 172	$ 212	$ 665	$ 15	$ 3,060	$ 3,012	$ 2,809
add: Non-controlling interests	(1)	–	–	(1)	–	(7)	(9)	(11)	(8)
After-tax effect of amortization of other intangibles	3	50	–	5	–	(3)	55	54	51
Adjusted net income (loss)	$ 1,461	$ 587	$ 172	$ 216	$ 665	$ 5	$ 3,106	$ 3,055	$ 2,852
less: Capital charge	461	296	41	67	429	174	1,468	1,505	1,420
Economic profit (loss)	$ 1,000	$ 291	$ 131	$ 149	$ 236	$ (169)	$ 1,638	$ 1,550	$ 1,432

	For the six months ended							
	April 30 2018							April 30 2017
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income	$ 2,980	$ 1,134	$ 299	$ 431	$ 1,413	$ (185)	$ 6,072	$ 5,836
add: Non-controlling interests	(3)	–	–	(1)	–	(16)	(20)	(20)
After-tax effect of amortization of other intangibles	6	96	–	8	–	(1)	109	107
Adjusted net income (loss)	$ 2,983	$ 1,230	$ 299	$ 438	$ 1,413	$ (202)	$ 6,161	$ 5,923
less: Capital charge	928	597	81	138	871	358	2,973	2,880
Economic profit (loss)	$ 2,055	$ 633	$ 218	$ 300	$ 542	$ (560)	$ 3,188	$ 3,043

Results excluding specified item

Our results were impacted by the following 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 Personal & Commercial Banking.

The following tables provide calculations of our consolidated and business segment results and measures excluding the specified item:

Consolidated results

	For the six months ended (1)		
	April 30 2017		
		Item excluded	
(Millions of Canadian dollars, except per share and percentage amounts) (2)	As reported	Gain related to the sale by Moneris (3)	Adjusted
Continuing operations			
Total revenue	$ 20,058	$ (212)	$ 19,846
PCL	596	–	596
PBCAE	1,273	–	1,273
Non-interest expense	10,646	–	10,646
Net income before income taxes	$ 7,543	$ (212)	$ 7,331
Income taxes	1,707	–	1,707
Net income	$ 5,836	$ (212)	$ 5,624
Net income available to common shareholders	$ 5,664	$ (212)	$ 5,452
Average number of common shares (thousands)	1,476,273		1,476,273
Basic earnings per share (in dollars)	$ 3.84	$ (0.14)	$ 3.70
Average number of diluted common shares (thousands)	1,484,332		1,484,332
Diluted earnings per share (in dollars)	$ 3.82	$ (0.14)	$ 3.68
Average common equity (4)	$ 64,700		$ 64,700
ROE (5)	17.7%		17.0%
Effective tax rate	22.6%		23.3%

(1) There were no specified items for the three months ended April 30, 2018 and April 30, 2017, or for the six months ended April 30, 2018.
(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(3) Includes foreign currency translation.
(4) Average common equity represents rounded figures.
(5) ROE is based on actual balances of average common equity before rounding.

Personal & Commercial Banking

	For the six months ended (1)		
	April 30 2017		
		Item excluded	
(Millions of Canadian dollars, except per share and percentage amounts) (2)	As reported	Gain related to the sale by Moneris (3)	Adjusted
Total revenue	$ 7,874	$ (212)	$ 7,662
PCL	511	–	511
Non-interest expense	3,478	–	3,478
Net income before income taxes	$ 3,885	$ (212)	$ 3,673
Net income	$ 2,952	$ (212)	$ 2,740
Selected balances and other information			
Non-interest expense	$ 3,478	$ –	$ 3,478
Total revenue	7,874	(212)	7,662
Efficiency ratio	44.2%		45.4%
Revenue growth rate	6.4%		3.5%
Non-interest expense growth rate	3.0%		3.0%
Operating leverage	3.4%		0.5%

(1) There were no specified items for the three months ended April 30, 2018 and April 30, 2017, or for the six months ended April 30, 2018.
(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(3) Includes foreign currency translation.

Canadian Banking

(Millions of Canadian dollars, except per share and percentage amounts) (2)	For the three months ended (1) January 31 2017 As reported	Item excluded: Gain related to the sale by Moneris (3)	Adjusted	For the six months ended (1) April 30 2017 As reported	Item excluded: Gain related to the sale by Moneris (3)	Adjusted
Total revenue	$ 3,824	$ (212)	$ 3,612	$ 7,382	$ (212)	$ 7,170
PCL	250	–	250	506	–	506
Non-interest expense	1,560	–	1,560	3,087	–	3,087
Net income before income taxes	$ 2,014	$ (212)	$ 1,802	$ 3,789	$ (212)	$ 3,577
Net income	$ 1,546	$ (212)	$ 1,334	$ 2,862	$ (212)	$ 2,650
Selected balances and other information						
Non-interest expense	$ 1,560	$ –	$ 1,560	$ 3,087	$ –	$ 3,087
Total revenue	3,824	(212)	3,612	7,382	(212)	7,170
Efficiency ratio	40.8%		43.2%	41.8%		43.1%
Revenue growth rate	10.4%		4.3%	7.2%		4.1%
Non-interest expense growth rate	1.5%		1.5%	2.4%		2.4%
Operating leverage	8.9%		2.8%	4.8%		1.7%

(1) There were no specified items for the three months ended April 30, 2018 and April 30, 2017, or for the six months ended April 30, 2018.
(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(3) Includes foreign currency translation.

Efficiency ratio excluding the change in fair value of investments in Insurance and specified item

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. In addition, revenue for the six months ended April 30, 2017 was impacted by the specified item noted previously.

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

(Millions of Canadian dollars, except percentage amounts) (1)	For the three months ended April 30 2018 As reported	Item excluded: Change in fair value of investments backing policyholder liabilities	Adjusted	January 31 2018 As reported	Item excluded: Change in fair value of investments backing policyholder liabilities	Adjusted	April 30 2017 As reported	Item excluded: Change in fair value of investments backing policyholder liabilities	Adjusted
Continuing operations									
Total revenue	$ 10,054	$ 174	$ 10,228	$ 10,828	$ (26)	$ 10,802	$ 10,412	$ (369)	$ 10,043
Non-interest expense	5,482	–	5,482	5,611	–	5,611	5,331	–	5,331
Efficiency ratio	54.5%		53.6%	51.8%		51.9%	51.2%		53.1%

(Millions of Canadian dollars, except per share and percentage amounts) (1)	For the six months ended April 30 2018 As reported	Item excluded: Change in fair value of investments backing policyholder liabilities	Adjusted	April 30 2017 As reported	Items excluded: Change in fair value of investments backing policyholder liabilities	Items excluded: Gain related to the sale of Moneris (2)	Adjusted
Continuing operations							
Total revenue	$ 20,882	$ 148	$ 21,030	$ 20,058	$ 112	$ (212)	$ 19,958
Non-interest expense	11,093	–	11,093	10,646	–	–	10,646
Efficiency ratio	53.1%		52.7%	53.1%			53.3%

(1) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(2) Includes foreign currency translation.

Personal & Commercial Banking

(Millions of Canadian dollars, except percentage amounts and as otherwise noted) (1)	As at or for the three months ended			As at or for the six months ended	
	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Net interest income	$ 2,852	$ 2,856	$ 2,597	$ 5,708	$ 5,246
Non-interest income	1,251	1,309	1,201	2,560	2,628
Total revenue	4,103	4,165	3,798	8,268	7,874
PCL	300	317	262	617	511
Non-interest expense	1,828	1,801	1,709	3,629	3,478
Income before income taxes	1,975	2,047	1,827	4,022	3,885
Net income	$ 1,459	$ 1,521	$ 1,360	$ 2,980	$ 2,952
Revenue by business					
Canadian Banking	$ 3,871	$ 3,927	$ 3,558	$ 7,798	$ 7,382
Caribbean & U.S. Banking	232	238	240	470	492
Selected balance sheet and other information					
ROE	27.8%	28.6%	28.0%	28.2%	30.1%
NIM	2.79%	2.73%	2.67%	2.76%	2.66%
Efficiency ratio	44.6%	43.2%	45.0%	43.9%	44.2%
Operating leverage	1.0%	0.4%	0.2%	0.7%	3.4%
Effective income tax rate	26.1%	25.7%	25.6%	25.9%	24.0%
Average earning assets, net	$ 419,200	$ 415,600	$ 398,900	$ 417,400	$ 397,200
Average loans and acceptances, net	419,900	416,000	398,200	417,900	396,400
Average deposits	357,900	357,000	342,400	357,500	339,500
AUA (2)	269,100	270,800	258,100	269,100	258,100
PCL on impaired loans as a % of average net loans and acceptances (3)	0.28%	0.26%	0.27%	0.27%	0.26%
Other selected information – Canadian Banking					
Net income	$ 1,426	$ 1,480	$ 1,316	$ 2,906	$ 2,862
NIM	2.74%	2.68%	2.62%	2.71%	2.61%
Efficiency ratio	42.6%	41.5%	42.9%	42.0%	41.8%
Operating leverage	0.7%	(1.7)%	0.6%	(0.6)%	4.8%
Operating leverage adjusted (4)	n.a.	4.3%	n.a.	2.6%	1.7%
Effective income tax rate	26.1%	25.9%	25.9%	26.0%	24.5%

(1) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(2) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at April 30, 2018 of $17.8 billion and $9.1 billion, respectively (January 31, 2018 – $18.2 billion and $9.1 billion; April 30, 2017 – $18.9 billion and $9.8 billion).
(3) PCL on impaired loans represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39. Stage 3 PCL under IFRS 9 is comprised of lifetime credit losses of credit-impaired loans, acceptances, and commitments.
(4) These are non-GAAP measures. The three months ended January 31, 2018 and the six months ended April 30, 2018 operating leverage ratios in Canadian Banking of (1.7)% and (0.6)%, respectively, were impacted by our share of the gain related to the sale of Moneris of $212 million (before- and after-tax) in Q1 2017, which was a specified item. For further details, including reconciliations, refer to the Key performance and non-GAAP measures section. The three months ended January 31, 2018 revenue and expense growth rates in Canadian Banking were 2.7% and 4.4%, respectively. 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 related to the sale of Moneris, as noted above, the three months ended January 31, 2018 and the six months ended April 30, 2018 adjusted revenue growth rates were 8.7% and 8.8%, respectively.
n.a. not applicable

Effective November 1, 2017, the lines of business within Canadian Banking have been realigned in a manner that emphasizes our client-centric strategy. Personal Financial Services and Cards and Payment Solutions, previously reported separately, are reported collectively as Personal Banking, and Business Financial Services has been renamed to Business Banking. The change had no impact on prior period net income for our Personal & Commercial Banking segment.

Financial performance

Q2 2018 vs. Q2 2017

Net income increased $99 million or 7% from last year, mainly reflecting improved spreads and average volume growth of 5%. These factors were partially offset by higher staff-related and marketing costs and higher PCL.

Total revenue increased $305 million or 8% from the prior year.

Canadian Banking revenue increased $313 million or 9% compared to last year, largely reflecting average volume growth of 6% in loans and 5% in deposits, and improved spreads. Higher purchase volumes driving higher card service revenue, and higher balances driving higher mutual fund distribution fees also contributed to the increase.

Caribbean & U.S. Banking revenue decreased $8 million or 3% compared to last year, mainly due to the impact of foreign exchange translation.

Net interest margin was up 12 bps, mainly due to improved spreads on deposits in Canadian Banking, reflecting the rising interest rate environment, partially offset by the impact of competitive pricing pressures.

PCL on impaired loans ratio increased 1 bp. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $119 million or 7%, primarily attributable to higher staff-related and marketing costs, and higher costs in support of business growth reflecting investments in digital initiatives.

Q2 2018 vs. Q1 2018

Net income decreased $62 million or 4% from last quarter, reflecting three less days in the quarter, partially offset by higher spreads and lower staff-related costs in Canadian Banking. The prior quarter also included a gain related to the reorganization of Interac.

Net interest margin increased 6 bps, mainly due to improved spreads on deposits in Canadian Banking, reflecting the rising interest rate environment.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income increased $28 million or 1% from last year as the prior year included our share of the gain related to the sale of the U.S. operations of Moneris of $212 million (before- and after-tax). Excluding our share of the gain, net income increased $240 million or 9%, mainly due to average volume growth of 5% and higher spreads, card service revenue and mutual fund distribution fees. These factors were partially offset by higher PCL, mainly due to the introduction of PCL on performing financial assets as a result of adopting IFRS 9, higher staff-related costs and increased costs in support of business growth.

Total revenue increased $394 million or 5%. Excluding our share of the gain related to the sale of Moneris, total revenue increased $606 million or 8%, reflecting average volume growth of 6% in both loans and deposits and improved spreads in Canadian Banking. Higher card service revenue due to higher purchase volumes, higher balances driving higher mutual fund distribution fees, and a gain related to the reorganization of Interac in the first quarter of 2018, also contributed to the increase.

PCL on impaired loans ratio increased 1 bp. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $151 million or 4%, primarily attributable to higher staff-related and marketing costs. Costs in support of business growth reflecting investments in digital initiatives, also contributed to the increase.

Results excluding the specified item noted above are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

Wealth Management

	As at or for the three months ended			As at or for the six months ended	
(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted) (1)	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Net interest income	$ 632	$ 612	$ 546	$ 1,244	$ 1,087
Non-interest income					
Fee-based revenue	1,570	1,589	1,425	3,159	2,830
Transaction and other revenue	403	582	510	985	1,049
Total revenue	2,605	2,783	2,481	5,388	4,966
PCL	(20)	(2)	15	(22)	28
Non-interest expense	1,939	2,011	1,892	3,950	3,801
Income before income taxes	686	774	574	1,460	1,137
Net income	$ 537	$ 597	$ 431	$ 1,134	$ 861
Revenue by business					
Canadian Wealth Management	$ 742	$ 749	$ 692	$ 1,491	$ 1,405
U.S. Wealth Management (including City National)	1,255	1,384	1,205	2,639	2,388
U.S. Wealth Management (including City National) (US$ millions)	977	1,100	899	2,077	1,789
Global Asset Management	516	556	486	1,072	979
International Wealth Management	92	94	98	186	194
Selected balance sheet and other information					
ROE	15.8%	17.3%	12.4%	16.5%	12.3%
NIM	3.47%	3.27%	2.99%	3.37%	2.90%
Pre-tax margin (2)	26.3%	27.8%	23.1%	27.1%	22.9%
Number of advisors (3)	4,912	4,901	4,817	4,912	4,817
Average earning assets, net	$ 74,800	$ 74,300	$ 74,800	$ 74,500	$ 75,500
Average loans and acceptances, net	54,800	52,500	52,000	53,600	51,400
Average deposits	93,000	92,600	94,800	92,800	95,000
AUA (4)	944,600	938,800	931,200	944,600	931,200
– U.S. Wealth Management (including City National) (4)	458,500	453,000	427,100	458,500	427,100
– U.S. Wealth Management (including City National) (US$ millions) (4)	357,300	368,100	312,900	357,300	312,900
AUM (4)	655,000	651,000	608,700	655,000	608,700
Average AUA	947,000	938,600	916,400	942,700	900,400
Average AUM	661,400	656,100	599,500	658,700	589,700
PCL on impaired loans as a % of average net loans and acceptances (5)	0.01%	0.04%	0.12%	0.02%	0.11%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts and as otherwise noted)	For the three months ended Q2 2018 vs. Q2 2017	For the three months ended Q2 2018 vs. Q1 2018	For the six months ended Q2 2018 vs. Q2 2017
Increase (decrease):			
Total revenue (1)	$ (45)	$ 32	$(113)
PCL	1	–	1
Non-interest expense (1)	(35)	24	(87)
Net income	(9)	7	(22)
Percentage change in average US$ equivalent of C$1.00	4%	(2)%	5%
Percentage change in average British pound equivalent of C$1.00	(5)%	(3)%	(5)%
Percentage change in average Euro equivalent of C$1.00	(8)%	(3)%	(8)%

(1) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(2) Pre-tax margin is defined as Income before income taxes divided by Total revenue.
(3) Represents client-facing advisors across all our Wealth Management businesses.
(4) Represents period-end spot balances.
(5) PCL on impaired loans represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39. Stage 3 PCL under IFRS 9 is comprised of lifetime credit losses of credit-impaired loans, acceptances, and commitments.

Financial performance
Q2 2018 vs. Q2 2017

Net income increased $106 million or 25% from a year ago, largely reflecting higher average fee-based assets, an increase in net interest income, and a lower effective tax rate reflecting benefits from the U.S. Tax Reform. Lower PCL also contributed to the increase. These factors were partially offset by higher variable compensation on improved results, increased costs in support of business growth, and higher regulatory costs in the U.S.

Total revenue increased $124 million or 5%.

Canadian Wealth Management revenue increased $50 million or 7%, mainly due to higher average fee-based assets reflecting capital appreciation and net sales, and an increase in net interest income reflecting the impact from higher interest rates. These factors were partially offset by lower transaction revenue.

U.S. Wealth Management (including City National) revenue increased $50 million or 4%. In U.S. dollars, revenue increased $78 million or 9%, largely reflecting an increase in net interest income due to volume growth and higher U.S. interest rates, higher average fee-based assets reflecting net sales and capital appreciation, and higher transaction revenue. These factors were partially offset by the change in the fair value of the hedge related to our U.S. share-based compensation plan, which was largely offset in non-interest expense.

Global Asset Management revenue increased $30 million or 6%, mainly due to higher average fee-based assets under management reflecting net sales and capital appreciation.

PCL on impaired loans ratio improved 11 bps, mainly due to lower provisions on impaired loans related to U.S. Wealth Management (including City National). For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $47 million or 2%, largely due to higher variable compensation on improved results, increased costs in support of business growth mainly due to higher staff-related costs, and higher regulatory costs in the U.S. These factors were partially offset by the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, and the impact of foreign exchange translation.

Q2 2018 vs. Q1 2018

Net income decreased $60 million or 10%, reflecting lower transaction revenue, a net change in the fair value of our U.S. share-based compensation plan, and lower performance fees. A favourable accounting adjustment related to City National in the prior period also contributed to the decrease. These factors were partially offset by lower PCL and higher net interest income due to higher interest rates and volume growth.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income increased $273 million or 32% from a year ago, mainly due to higher average fee-based assets, an increase in net interest income, and a lower effective tax rate reflecting benefits from the U.S. Tax Reform. Lower PCL also contributed to the increase. These factors were partially offset by higher variable compensation on improved results, higher costs in support of business growth, and the impact of foreign exchange translation.

Total revenue increased $422 million or 8%, mainly due to higher average fee-based assets reflecting net sales and capital appreciation, and an increase in net interest income due to higher interest rates and volume growth. These factors were partially offset by the impact of foreign exchange translation, and the change in the fair value of the hedge related to our U.S. share-based compensation plan, which was largely offset in non-interest expense.

PCL on impaired loans ratio improved 9 bps, mainly due to lower provisions on impaired loans related to U.S. Wealth Management (including City National). For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $149 million or 4%, largely due to higher variable compensation on improved results, and an increase in costs in support of business growth mainly reflecting higher staff-related costs, and higher regulatory costs in the U.S. These factors were partially offset by the impact of foreign exchange translation, and the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue.

Insurance

	As at or for the three months ended			As at or for the six months ended	
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Non-interest income					
Net earned premiums	$ 824	$ 939	$ 879	$ 1,763	$ 1,628
Investment income	(87)	166	527	79	174
Fee income	69	39	42	108	143
Total revenue	806	1,144	1,448	1,950	1,945
Insurance policyholder benefits and claims	351	768	1,021	1,119	1,151
Insurance policyholder acquisition expense	70	68	69	138	122
Non-interest expense	148	142	140	290	280
Income before income taxes	237	166	218	403	392
Net income	$ 172	$ 127	$ 166	$ 299	$ 300
Revenue by business					
Canadian Insurance	$ 310	$ 621	$ 978	$ 931	$ 998
International Insurance	496	523	470	1,019	947
Selected balances and other information					
ROE	36.3%	28.2%	41.5%	32.3%	37.6%
Premiums and deposits (1)	$ 981	$ 1,095	$ 1,008	$ 2,076	$ 2,011
Fair value changes on investments backing policyholder liabilities	(174)	26	369	(148)	(112)

(1) 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 2018 vs. Q2 2017

Net income increased $6 million or 4% from a year ago, primarily reflecting favourable investment-related experience, partially offset by higher claims volumes in both life retrocession and disability portfolios, and increased costs related to business growth and strategic initiatives.

Total revenue decreased $642 million or 44% compared to the prior year.

Canadian Insurance revenue decreased $668 million or 68%, mainly due to the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE.

International Insurance revenue increased $26 million or 6%, mainly due to the change in fair value of investments backing our policyholder liabilities, which is largely offset in PBCAE.

PBCAE decreased $669 million or 61%, primarily due to the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue, and favourable investment-related experience. These factors were partially offset by higher claims volumes in both life retrocession and disability portfolios.

Non-interest expense increased $8 million or 6%, mainly due to increased costs related to business growth and strategic initiatives.

Q2 2018 vs. Q1 2018

Net income increased $45 million or 35% from the prior quarter, largely reflecting favourable investment-related experience and lower disability claims volumes.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income decreased $1 million from a year ago, as the impact of favourable investment-related experience was more than offset by higher claims volumes in both life retrocession and disability portfolios and favourable updates in the prior year related to premium and mortality experience.

Total revenue increased $5 million compared to the prior year, due to business growth, and the impact of restructured international life contracts in the prior year, largely offset in PBCAE. These factors were partially offset by the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in PBCAE.

PBCAE decreased $16 million, mainly reflecting favourable investment-related experience, and the change in fair value of investments backing our policyholder liabilities and lower group annuity sales, both of which are largely offset in revenue. These factors were largely offset by the impact of restructured international life contracts in the prior year, largely offset in revenue, higher claims volumes in both life retrocession and disability portfolios, and favourable updates in the prior year related to premium and mortality experience. Business growth in the current year also partially offset the decrease.

Non-interest expense increased $10 million or 4%, mainly due to increased costs related to business growth and strategic initiatives.

Investor & Treasury Services

(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 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Net interest income	$ 118	$ 128	$ 173	$ 246	$ 410
Non-interest income	553	548	435	1,101	829
Total revenue	671	676	608	1,347	1,239
Non-interest expense	391	389	355	780	705
Net income before income taxes	280	287	253	567	534
Net income	$ 212	$ 219	$ 193	$ 431	$ 407
Selected balance sheet and other information					
ROE	28.1%	26.9%	24.6%	27.5%	24.9%
Average deposits	$ 163,600	$ 155,300	$ 127,900	$ 159,400	$ 128,200
Client deposits	58,200	56,900	52,900	57,500	52,700
Wholesale funding deposits	105,400	98,400	75,000	101,900	75,500
AUA (1)	4,439,800	4,431,800	4,111,400	4,439,800	4,111,400
Average AUA	4,502,800	4,439,300	3,978,100	4,470,500	3,874,400

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 2018 vs. Q2 2017	Q2 2018 vs. Q1 2018	Q2 2018 vs. Q2 2017
Increase (decrease):			
Total revenue	$ 20	$ 11	$ 39
Non-interest expense	16	6	31
Net income	4	3	8
Percentage change in average US$ equivalent of C$1.00	4%	(2)%	5%
Percentage change in average British pound equivalent of C$1.00	(5)%	(3)%	(5)%
Percentage change in average Euro equivalent of C$1.00	(8)%	(3)%	(8)%

(1) Represents period-end spot balances.

Q2 2018 vs. Q2 2017

Net income increased $19 million or 10%, primarily due to higher revenue from our asset services business, improved margins and growth in client deposits. These factors were partially offset by lower funding and liquidity revenue and higher investment in client-focused technology initiatives.

Total revenue increased $63 million or 10%, mainly due to increased revenue from our asset services business driven by higher client activity and market volatility. The impact of foreign exchange translation, improved margins and growth in client deposits also contributed to the increase. These factors were partially offset by lower funding and liquidity revenue.

Non-interest expense increased $36 million or 10%, largely reflecting the impact of foreign exchange translation and continued investment in client-focused technology initiatives.

Q2 2018 vs. Q1 2018

Net income decreased $7 million or 3%, primarily due to decreased funding and liquidity revenue including lower gains from the disposition of certain securities compared to the prior quarter. These factors were partially offset by increased revenue from our asset services business driven by higher client activity and market volatility, and improved margins.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income increased $24 million or 6%, largely due to increased revenue from our asset services business, growth in client deposits and improved margins. These factors were partially offset by higher investment in client-focused technology initiatives and lower funding and liquidity revenue.

Total revenue increased $108 million or 9%, mainly due to the impact of foreign exchange translation and increased revenue from our asset services business driven by higher market volatility and client activity. Growth in client deposits and improved margins also contributed to the increase. These factors were partially offset by decreased funding and liquidity revenue.

Non-interest expense increased $75 million or 11% due to the impact of foreign exchange translation, higher investment in client-focused technology initiatives, and higher costs in support of business growth mainly reflecting increased staff-related costs.

Capital Markets

(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 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Net interest income (1)	$ 841	$ 866	$ 922	$ 1,707	$ 1,869
Non-interest income (1)	1,169	1,309	1,195	2,478	2,319
Total revenue (1)	2,010	2,175	2,117	4,185	4,188
PCL	(7)	20	24	13	56
Non-interest expense	1,190	1,214	1,173	2,404	2,298
Net income before income taxes	827	941	920	1,768	1,834
Net income	$ 665	$ 748	$ 668	$ 1,413	$ 1,330
Revenue by business					
Corporate and Investment Banking	$ 967	$ 994	$ 1,020	$ 1,961	$ 1,956
Global Markets	1,092	1,221	1,162	2,313	2,356
Other	(49)	(40)	(65)	(89)	(124)
Selected balance sheet and other information					
ROE	13.4%	14.7%	14.2%	14.1%	13.7%
Average total assets	$ 563,700	$ 570,200	$ 499,600	$ 567,000	$ 496,500
Average trading securities	98,900	100,800	95,000	99,900	96,900
Average loans and acceptances, net	82,800	81,400	83,600	82,100	83,700
Average deposits	71,000	64,900	59,900	67,900	59,300
PCL on impaired loans as a % of average net loans and acceptances (2)	0.07%	0.22%	0.12%	0.15%	0.13%

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items (Millions of Canadian dollars, except percentage amounts and as otherwise noted)	For the three months ended		For the six months ended
	Q2 2018 vs. Q2 2017	Q2 2018 vs. Q1 2018	Q2 2018 vs. Q2 2017
Increase (decrease):			
Total revenue	$ (34)	$ 32	$ (87)
Non-interest expense	(18)	19	(48)
Net income	(15)	10	(37)
Percentage change in average US$ equivalent of C$1.00	4%	(2)%	5%
Percentage change in average British pound equivalent of C$1.00	(5)%	(3)%	(5)%
Percentage change in average Euro equivalent of C$1.00	(8)%	(3)%	(8)%

(1) The taxable equivalent basis (teb) adjustment for the three months ended April 30, 2018 was $151 million (January 31, 2018 – $92 million, April 30, 2017 – $97 million) and for the six months ended April 30, 2018 was $243 million (April 30, 2017 – $216 million). For further discussion, refer to the How we measure and report our business segments section of our 2017 Annual Report.

(2) PCL on impaired loans represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39. Stage 3 PCL under IFRS 9 is comprised of lifetime credit losses of credit-impaired loans, acceptances and commitments.

Q2 2018 vs. Q2 2017

Net income decreased $3 million, primarily due to lower revenue in Global Markets and Corporate and Investment Banking and the impact of foreign exchange translation. These factors were largely offset by a lower effective tax rate reflecting changes in earnings mix and the benefits from the U.S. Tax Reform, and lower PCL.

Total revenue decreased $107 million or 5%, which includes the impact of foreign exchange of $34 million.

Corporate and Investment Banking revenue decreased $53 million or 5%, mainly due to lower equity and debt origination activity and decreased loan syndication activity in North America, and lower M&A activity in the U.S. These factors were partially offset by higher municipal banking activity, an improvement in European Investment Banking revenue and increased revenue in our lending business largely in Canada and Europe.

Global Markets revenue decreased $70 million or 6%, primarily driven by lower equity and debt origination activity largely in the U.S. and decreased fixed income trading revenue in Europe and the U.S. Lower foreign exchange trading revenue mainly in Canada also contributed to the decrease. These factors were partially offset by increased fixed income trading revenue in Canada and gains from the disposition of certain securities.

Other revenue increased $16 million largely reflecting gains in our legacy U.S. auction rate securities portfolios.

PCL on impaired loans ratio improved 5 bps, mainly due to lower provisions in the oil & gas sector in the current quarter, partially offset by a provision taken on one account in the consumer goods sector. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $17 million or 1%, mainly due to higher costs related to changes in the timing of deferred compensation and increased regulatory and compliance costs, partially offset by lower variable compensation on decreased results and the impact of foreign exchange translation.

Q2 2018 vs. Q1 2018

Net income decreased $83 million or 11%, primarily due to lower equity originations mainly in North America reflecting lower market activity, and decreased fixed income trading revenue across all regions. Lower equity trading revenue in the U.S. also contributed to the decrease. These factors were partially offset by lower variable compensation on decreased results, lower PCL, higher municipal banking activity and the impact of foreign exchange translation.

Q2 2018 vs. Q2 2017 (Six months ended)

Net income increased $83 million or 6%, driven by a lower effective tax rate reflecting changes in earnings mix and the benefits from the U.S. Tax Reform, higher revenue in Corporate and Investment Banking and lower PCL. These factors were partially offset by higher costs related to changes in the timing of deferred compensation, increased regulatory and compliance costs, and the impact of foreign exchange translation.

Total revenue remained relatively flat, as the impact of foreign exchange translation, lower fixed income trading revenue largely in Europe, and decreased loan syndication activity in North America, were mostly offset by higher lending revenue largely in Canada and Europe, increased equity trading revenue and higher debt origination activity across most regions, gains in our legacy U.S. auction rate securities portfolios, and increased municipal banking activity.

PCL on impaired loans ratio increased 2 bps. For further details, refer to Credit quality performance in the Credit risk section.

Non-interest expense increased $106 million or 5%, largely due to higher costs related to changes in the timing of deferred compensation and increased regulatory and compliance costs. Litigation recoveries in the prior year and higher technology spend also contributed to the increase. These factors were partially offset by the impact of foreign exchange translation.

Corporate Support

	For the three months ended			For the six months ended	
(Millions of Canadian dollars, except as otherwise noted)	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Net interest income (loss) (1)	$ (22)	$ (17)	$ (40)	$ (39)	$ (90)
Non-interest income (loss) (1)	(119)	(98)	–	(217)	(64)
Total revenue (1)	(141)	(115)	(40)	(256)	(154)
PCL	1	(1)	1	–	1
Non-interest expense	(14)	54	62	40	84
Net income (loss) before income taxes (1)	(128)	(168)	(103)	(296)	(239)
Income taxes (recoveries) (1)	(143)	32	(94)	(111)	(225)
Net income (loss) (2)	$ 15	$ (200)	$ (9)	$ (185)	$ (14)

(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, 2018 was $7 million (January 31, 2018 – $9 million; April 30, 2017 – $8 million) and for the six months ended April 30, 2018 was $16 million (April 30, 2017 – $17 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, 2018 was $151 million, compared to $92 million in the prior quarter and $97 million last year.

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

Q2 2018

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

Q1 2018

Net loss was $200 million, largely due to the impact of the U.S. Tax Reform of $178 million which was primarily related to the write-down of net deferred tax assets.

Q2 2017

Net loss was $9 million, as asset/liability management activities were more than offset by higher legal and severance costs.

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.

Q2 2017 (Six months ended)

Net loss was $14 million, largely due to higher legal and severance costs, 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 (1)

(Millions of Canadian dollars, except per share and percentage amounts)	2018		2017				2016	
	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3
Net interest income	$ 4,421	$ 4,445	$ 4,361	$ 4,257	$ 4,198	$ 4,324	$ 4,187	$ 4,123
Non-interest income (2)	5,633	6,383	6,162	5,831	6,214	5,322	5,177	6,229
Total revenue (2)	$ 10,054	$ 10,828	$ 10,523	$ 10,088	$ 10,412	$ 9,646	$ 9,364	$ 10,352
PCL (3)	274	334	234	320	302	294	358	318
PBCAE	421	836	1,137	643	1,090	183	397	1,210
Non-interest expense (2)	5,482	5,611	5,611	5,537	5,331	5,315	5,297	5,188
Net income before income taxes	$ 3,877	$ 4,047	$ 3,541	$ 3,588	$ 3,689	$ 3,854	$ 3,312	$ 3,636
Income taxes	817	1,035	704	792	880	827	769	741
Net income	$ 3,060	$ 3,012	$ 2,837	$ 2,796	$ 2,809	$ 3,027	$ 2,543	$ 2,895
EPS – basic	$ 2.06	$ 2.02	$ 1.89	$ 1.86	$ 1.86	$ 1.98	$ 1.66	$ 1.88
– diluted	2.06	2.01	1.88	1.85	1.85	1.97	1.65	1.88
Segments – net income (loss)								
Personal & Commercial Banking	$ 1,459	$ 1,521	$ 1,404	$ 1,399	$ 1,360	$ 1,592	$ 1,275	$ 1,322
Wealth Management	537	597	491	486	431	430	396	388
Insurance	172	127	265	161	166	134	228	364
Investor & Treasury Services	212	219	156	178	193	214	174	157
Capital Markets	665	748	584	611	668	662	482	635
Corporate Support	15	(200)	(63)	(39)	(9)	(5)	(12)	29
Net income	$ 3,060	$ 3,012	$ 2,837	$ 2,796	$ 2,809	$ 3,027	$ 2,543	$ 2,895
Effective income tax rate	21.1%	25.6%	19.9%	22.1%	23.9%	21.5%	23.2%	20.4%
Period average US$ equivalent of C$1.00	$ 0.778	$ 0.794	$ 0.792	$ 0.770	$ 0.746	$ 0.752	$ 0.757	$ 0.768

(1) Fluctuations in the Canadian dollar relative to other foreign currencies have affected our consolidated results over the period.
(2) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(3) 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 fair value through profit or loss (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). Refer to the Credit risk section and Note 2 of our Condensed Financial Statements for further details.

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's investment management business.

Specified items affecting our consolidated results

- In the first quarter of 2017, our results included our share of a gain related to the sale of the U.S. operations of Moneris of $212 million (before- and after-tax).
- In the third quarter of 2016, our results included a gain from the sale of our home and auto insurance manufacturing business, RBC General Insurance Company, to Aviva Canada Inc., which was $287 million ($235 million after-tax) and recorded in Insurance.

Trend analysis

The Canadian economy has generally improved over the period, with strong growth throughout the first half of 2017 reflecting robust gains in consumer spending amid strong employment growth, low interest rates, and wealth effects from rising home prices. Growth began to moderate during the third quarter of 2017 as the elevated momentum in the prior two quarters was unsustainable. With the overall growth over 2017, the BoC raised its overnight rate in January 2018 following two rate hikes in 2017. The U.S. economy also experienced growth over the period due to higher household wages, strong job growth, and continued consumer confidence as well as rising business investment. As a result of improving economic conditions, in March 2018, the Fed raised its funds target range for the fifth time over the period. Global markets had been appreciating since the beginning of the period. However, higher levels of volatility in the first quarter of 2018 have brought equity markets down from their highs reached in mid-January 2018. For further details, refer to the Economic, market, and regulatory review and outlook section.

Earnings have generally trended upwards over the period, driven by our Personal & Commercial Banking results reflecting solid volume growth, along with higher spreads since the latter half of 2017, higher fee-based revenue, and our share of the gain from the sale of the U.S. operations of Moneris in the first quarter of 2017. Our Wealth Management results reflect growth in average fee-based assets reflecting capital appreciation and net sales, volume growth, and the impact from higher interest rates since the first half of fiscal 2017, which was partially offset by higher variable compensation on improved results and costs in support of business growth.

Capital Markets results have generally trended upwards over the period, driven by increased client activity and generally improved market conditions, as well as a lower effective tax rate reflecting changes in earning mix and the benefits from the U.S. Tax Reform in 2018. The decline in the fourth quarter of 2017 was primarily due to lower trading revenue across most regions, as well as lower M&A and equity origination activity. Q1 2018 saw a rebound in both trading revenue and equity origination activity. However, lower market activity adversely impacted equity and debt origination activity in Q2 2018. Results in our Insurance segment were impacted by the gain on the sale of our home and auto insurance manufacturing business in the third quarter of 2016 as noted previously, the annual actuarial adjustments in the fourth quarter of each year, and favourable investment-related experience in the second quarter of 2018. Investor & Treasury Services results have generally trended higher in 2016 and 2017 due to higher funding and liquidity earnings, reflecting tightening credit spreads, higher foreign exchange market execution, as well as favourable interest and foreign exchange rates movements, while the first half of 2018 experienced growth from our asset services business, driven by higher market volatility and client activity. Earnings in the first quarter of 2018 were negatively impacted by the U.S. Tax Reform which resulted in the write-down of net deferred tax assets, but will benefit throughout 2018 from the lower ongoing corporate tax rate on U.S. earnings.

Revenue has generally increased over the period, reflecting solid volume growth, higher spreads since the latter half of 2017, and higher fee-based revenue in our Personal & Commercial Banking businesses. The first quarter of 2017 benefitted from our share of the gain on sale of the U.S. operations of Moneris as noted previously. Wealth Management revenue has generally trended upwards primarily due to growth in average fee-based assets and higher net interest income reflecting volume growth and the impact from higher interest rates since the first half of 2017. Capital Markets benefitted from stabilizing credit spreads since 2016, resulting in higher fixed income trading throughout the period, except for the latter half of fiscal 2017, which experienced a period of low market volatility, and in the second quarter of 2018, which experienced lower market activity. The favourable impact of foreign exchange translation due to a generally weaker Canadian dollar over the first half of the period was partially offset by the generally strengthening Canadian dollar during the past four quarters. Insurance revenue was primarily impacted by changes in the fair value of investments backing our policyholder liabilities and the impact of new group annuity and longevity reinsurance contracts, which are largely offset in PBCAE, and benefitted from the gain on sale of our home and auto insurance manufacturing business in the third quarter of 2016, as noted previously.

The credit quality of our portfolios has fluctuated over the period. PCL saw a general improvement in 2017 due to lower provisions and higher recoveries in our Capital Markets and Canadian Banking portfolios. On November 1, 2017, we adopted IFRS 9, which resulted in the introduction of PCL on performing financial assets with little impact to date.

PBCAE has fluctuated quarterly as it includes the changes to the fair value of investments backing our policyholder liabilities, the impact of new group annuity and longevity reinsurance contracts, which are largely offset in revenue. PBCAE has also increased due to business growth, and has been impacted by investment-related experience, actuarial liability adjustments and claims volumes over the period.

While we continue to focus on efficiency management activities, non-interest expense has generally trended upwards over the period, mostly due to higher variable compensation and costs to support business growth. Growth in non-interest expense in 2017 mainly reflects higher variable compensation in Wealth Management and Capital Markets on improved results, as well as higher costs in support of business growth and our ongoing investments in technology, including digital initiatives. The decrease over the second quarter of 2018 mainly reflects the change in the fair value of our U.S. share-based compensation plan, which was largely offset in revenue, and lower variable compensation. In addition, the first quarter of 2017 included an impairment related to properties held for sale, while the third quarter of 2017 was impacted by higher severance costs. The unfavourable impact of foreign exchange translation due to a generally weaker Canadian dollar over the first half of the period was partially offset by the generally strengthening Canadian dollar during the past four quarters.

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. Our effective income tax rate has generally been impacted over the period by higher earnings before income taxes and lower tax-exempt income in 2017. The first half of 2018 was impacted by the U.S. Tax Reform, which resulted in the write-down of net deferred tax assets in the first quarter partially offset by the ongoing lower corporate tax rate on U.S. earnings, which commenced on January 1, 2018.

Financial condition

Condensed balance sheets

The following table shows our condensed balance sheets:

	As at	
(Millions of Canadian dollars)	April 30 2018	October 31 2017
Assets (1)		
Cash and due from banks	$ 32,765	$ 28,407
Interest-bearing deposits with banks	36,979	32,662
Securities, net of applicable allowance (2)	220,841	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	261,184	220,977
Loans		
Retail	388,558	385,170
Wholesale	165,643	159,606
Allowance for loan losses	(2,808)	(2,159)
Other – Derivatives	94,175	95,023
– Other (3)	77,441	74,788
Total assets	$ 1,274,778	$ 1,212,853
Liabilities (1)		
Deposits	$ 822,048	$ 789,635
Other – Derivatives	90,890	92,127
– Other (3)	276,747	247,398
Subordinated debentures	9,068	9,265
Total liabilities	1,198,753	1,138,425
Equity attributable to shareholders	75,425	73,829
Non-controlling interests	600	599
Total equity	76,025	74,428
Total liabilities and equity	$ 1,274,778	$ 1,212,853

(1) Foreign currency-denominated assets and liabilities are translated to Canadian dollars.
(2) Securities are comprised of trading and investment securities. Under IFRS 9, investment securities represent debt and equity securities at FVOCI and debt securities at amortized cost, net of the applicable allowance. Under IAS 39, investment securities represented available-for-sale securities and held-to-maturity securities. For further details on the impacts of the adoption of IFRS 9, refer to Note 2 of our Condensed Financial Statements.
(3) Other – Other assets and liabilities include Segregated fund net assets and liabilities, respectively.

Q2 2018 vs. Q4 2017

Total assets increased $62 billion or 5% from October 31, 2017. Foreign exchange translation decreased total assets by $3 billion.

Cash and due from banks was up $4 billion or 15%, mainly due to higher deposits with central banks reflecting our cash management and liquidity requirements.

Interest-bearing deposits with banks increased $4 billion or 13%, largely reflecting higher deposits with central banks, partially offset by lower deposits with commercial banks.

Securities, net of applicable allowance, were up $2 billion or 1%, largely driven by the change in classification of certain securities in loans and receivables to investment securities as a result of adopting IFRS 9, and higher equity trading positions reflecting market conditions. These factors were partially offset by lower government debt securities largely reflecting our cash management and liquidity requirements.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased $40 billion or 18%, mainly attributable to increased client activities, partially offset by higher financial netting.

Loans (net of Allowance for loan losses) were up $9 billion or 2%, largely due to volume growth which led to higher wholesale loans and residential mortgages, partially offset by the reclassification of certain securities in loans and receivables to investment securities as mentioned above.

Derivative assets were down $1 billion or 1%.

Other assets were up $3 billion or 4%.

Total liabilities increased $60 billion or 5% from October 31, 2017. Foreign exchange translation decreased total liabilities by $3 billion.

Deposits increased $32 billion or 4%, mainly as a result of higher business and retail deposits driven by increased client demand, and higher issuances of fixed-term notes due to funding requirements.

Derivative liabilities were down $1 billion or 1%.

Other liabilities increased $29 billion or 12%, mainly attributable to higher obligations related to repurchase agreements reflecting increased client demand partially offset by higher financial netting.

Total equity increased $2 billion or 2% reflecting earnings, net of dividends and share repurchases, partially offset by our adoption of IFRS 9 which resulted in a decrease in equity of $637 million. For further details on the impacts of the adoption of IFRS 9, refer to Note 2 of our Condensed Financial Statements.

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, liquidity and funding risk, which are discussed in the Risk management section. Our significant off-balance sheet transactions include those described on pages 48 to 50 of our 2017 Annual Report.

Risk management

Credit risk

Effective November 1, 2017, we adopted IFRS 9, which introduced an expected loss accounting model for credit losses that differs significantly from the incurred loss model under IAS 39 and results in earlier recognition of credit losses. Under IAS 39, credit loss allowances were applied to loans, acceptances, and commitments. Under IFRS 9, credit loss allowances are applied to all financial assets except for those classified or designated as FVTPL and equity securities designated as FVOCI. A description of the new expected credit loss impairment model is provided below. For further details on our credit risk management practices, refer to the Credit risk section of our 2017 Annual Report.

Expected credit loss impairment model
Under IFRS 9, credit loss allowances are measured on each reporting date according to a three-stage expected credit loss impairment model. Changes in the required credit loss allowance are recorded in profit or loss as PCL.

Performing financial assets
Stage 1
From initial recognition of a financial asset to the date on which an asset has experienced a significant increase in credit risk relative to its initial recognition, a Stage 1 loss allowance is recognized equal to the credit losses expected to result from its default occurring over the earlier of the next 12 months or its maturity date.

Stage 2
Following a significant increase in credit risk relative to the initial recognition of the financial asset, a Stage 2 loss allowance is recognized equal to the credit losses expected over the remaining lifetime of the asset. The assessment of significant increases in credit risk requires considerable judgment and is based primarily on established thresholds for changes in lifetime probability of default. Thresholds are defined at the product and/or business level and may vary across products and businesses.

The assessment for significant increases in credit risk since initial recognition is performed independently as at each reporting date. Assets can move in both directions through the stages of the impairment model.

Stage 1 and Stage 2 allowances are held against performing financial assets. The measurement of expected credit losses is primarily based on the product of the instrument's probability of default (PD), loss given default (LGD), and exposure at default (EAD), discounted to the reporting date. The main difference between Stage 1 and Stage 2 allowances is the time horizon. Stage 1 allowances are estimated using the PD over a maximum period of 12 months while Stage 2 allowances are estimated using the PD over the remaining lifetime of the asset. The remaining lifetime of an asset is generally based on its remaining contractual life; however, for certain revolving products, remaining lifetime is based on the period over which we expect to be exposed to credit losses.

An expected credit loss estimate is produced for each individual exposure; however the relevant parameters are modeled on a collective basis. For the small percentage of our portfolios that lack detailed historical information and/or loss experience, we apply simplified measurement approaches that may differ from what is described above. These approaches have been designed to maximize the available information that is reliable and supportable for each portfolio and may be collective in nature.

Impaired financial assets
Stage 3
When a financial asset is considered to be credit-impaired, the allowance continues to represent lifetime expected credit losses; however, interest income is calculated based on the amortized cost of the asset, net of the loss allowance, rather than on its gross carrying amount. Stage 3 allowances are held against impaired loans and effectively replace the allowance for impaired loans under IAS 39. Our assessment of whether an asset is credit-impaired continues to leverage credit risk management processes that existed under IAS 39. However, our process for estimating the allowance for impaired loans was updated to reflect the requirements of IFRS 9, such as the consideration of multiple forward-looking scenarios in determining the appropriate allowance. The definition of gross impaired loans for certain products was also shortened to align with our definition of default under IFRS 9, which is generally 90 days past due. Loans are written off when there is no realistic probability of recovery.

Allowances in each stage in the expected credit loss model are impacted by a large number of interrelated variables, including but not limited to, the credit quality of the borrower or instrument, volumes, forecast macroeconomic conditions and migration between stages. The measurement of expected credit losses considers information about past events and current conditions as well as reasonable and supportable forecasts of future events and economic conditions. The use of forward looking information is a key feature of the IFRS 9 impairment model and requires significant judgment.

Expected loss models are used for both regulatory capital and accounting purposes. Under both models, expected losses are calculated as the product of PD, LGD and EAD. However, there are certain key differences under current Basel and IFRS 9 reporting frameworks which could lead to significantly different expected loss estimates, including:

- Basel PDs are based on long-run averages over an entire economic cycle. IFRS 9 PDs are based on current conditions, adjusted for estimates of future conditions that will impact PD under probability-weighted macroeconomic scenarios.
- Basel PDs consider the probability of default over the next 12 months. IFRS 9 PDs consider the probability of default over the next 12 months only for instruments in Stage 1. Expected credit losses for instruments in Stage 2 are calculated using lifetime PDs.
- Basel LGDs are based on severe but plausible downturn economic conditions. IFRS 9 LGDs are based on current conditions, adjusted for estimates of future conditions that will impact LGD under probability-weighted macroeconomic scenarios.

For further details on the adoption of IFRS 9, including our updated accounting policies, refer to Note 2 of our Condensed Financial Statements.

Gross credit risk exposure by portfolio, sector and geography

The following table presents gross credit risk exposure as calculated based on the definitions provided under the Basel III framework. For further details, refer to pages 59-60 of our 2017 Annual Report.

	As at							
	April 30 2018						January 31 2018	October 31 2017
	Lending-related and other			Trading-related				
(Millions of Canadian dollars)	Outstanding (1)	Undrawn commitments (2)	Other (3)	Repo-style transactions	Derivatives (4)	Total exposure (5)	Total exposure (5)	Total exposure (5)
By portfolio								
Residential mortgages	$ 273,383	$ 913	$ 277	$ –	$ –	$ 274,573	$ 273,019	$ 271,435
Personal	91,995	96,703	175	–	–	188,873	181,297	180,590
Credit cards	18,551	24,725	–	–	–	43,276	38,420	39,861
Small business (6)	4,629	6,888	6	–	–	11,523	11,518	11,387
Retail	$ 388,558	$ 129,229	$ 458	$ –	$ –	$ 518,245	$ 504,254	$ 503,273
Business (6)								
Agriculture	$ 7,904	$ 1,382	$ 77	$ –	$ 45	$ 9,408	$ 9,169	$ 8,859
Automotive	9,113	6,260	401	–	428	16,202	15,507	15,067
Consumer goods	11,286	11,564	639	–	422	23,911	21,745	21,389
Energy								
Oil & Gas	7,187	10,910	1,777	–	1,314	21,188	19,883	19,835
Utilities	5,318	15,063	3,430	–	1,836	25,647	24,378	25,554
Financing products	5,863	2,119	373	1,252	440	10,047	9,619	10,401
Forest products	1,050	724	87	–	24	1,885	1,675	1,647
Health services	7,551	5,632	2,421	–	600	16,204	15,713	13,923
Holding and investments	8,876	720	558	–	83	10,237	9,886	10,501
Industrial products	6,225	8,470	492	–	517	15,704	17,458	14,253
Mining & metals	1,212	3,732	958	–	69	5,971	5,863	6,057
Non-bank financial services	12,901	16,447	16,678	404,897	33,583	484,506	464,916	408,295
Other services	15,047	9,668	3,326	928	556	29,525	27,598	27,914
Real estate & related	48,862	12,188	2,505	3	485	64,043	60,898	59,513
Technology & media	10,011	21,810	1,099	771	3,086	36,777	29,777	26,413
Transportation & environment	7,389	5,721	2,632	–	548	16,290	14,332	15,803
Other sectors	4,338	16	3,472	36	699	8,561	10,051	12,862
Sovereign (6)	6,523	11,126	122,082	46,387	14,338	200,456	204,220	182,933
Bank (6)	4,655	1,350	130,451	125,892	22,608	284,956	279,651	268,409
Wholesale	$ 181,311	$ 144,902	$ 293,458	$ 580,166	$ 81,681	$ 1,281,518	$ 1,242,339	$ 1,149,628
Total exposure	$ 569,869	$ 274,131	$ 293,916	$ 580,166	$ 81,681	$ 1,799,763	$ 1,746,593	$ 1,652,901
By geography (7)								
Canada	$ 465,370	$ 169,171	$ 107,178	$ 75,546	$ 24,507	$ 841,772	$ 819,904	$ 808,249
U.S.	77,387	78,810	69,370	306,597	12,562	544,726	511,601	490,574
Europe	13,070	20,952	96,077	120,831	38,322	289,252	288,532	242,702
Other International	14,042	5,198	21,291	77,192	6,290	124,013	126,556	111,376
Total exposure	$ 569,869	$ 274,131	$ 293,916	$ 580,166	$ 81,681	$ 1,799,763	$ 1,746,593	$ 1,652,901

(1) Represents outstanding balances on loans and acceptances.
(2) Undrawn commitments represent an estimate of the contractual amount that may be drawn upon at the time of default of an obligor.
(3) Includes credit equivalent amounts for contingent liabilities such as letters of credit and guarantees, outstanding amounts for debt securities carried at FVOCI, deposits with financial institutions and other assets.
(4) Credit equivalent amount after factoring in master netting agreements.
(5) Gross credit risk exposure is before allowance for loan losses. Exposures under Basel III asset classes of qualifying revolving retail and other retail are largely included within Personal and Credit cards, while home equity lines of credit are included in Personal.
(6) For further information, refer to Note 5 of our 2017 Annual Consolidated Financial Statements.
(7) Geographic profile is based on country of residence of the borrower.

Q2 2018 vs. Q1 2018

Total gross credit risk exposure increased $53 billion or 3% from the prior quarter, primarily due to growth in repo-style transactions and loans and acceptances, and the impact of foreign exchange translation. These increases were partially offset by decreases in derivatives, guarantees, and investment securities.

Retail exposure increased $14 billion or 3%, driven by growth in undrawn commitments in personal lending and credit cards.

Wholesale exposure increased $39 billion or 3%, primarily attributable to growth in repo-style transactions and loans and acceptances, mainly driven by business growth in the technology & media, non-bank financial services, and real estate & related sectors, and the impact of foreign exchange translation. These increases were partially offset by decreases in derivatives, guarantees, and investment securities.

The geographic mix of our gross credit risk exposure remained relatively unchanged from the prior quarter. Our exposure in Canada, the U.S., Europe and Other International was 47%, 30%, 16% and 7%, respectively (January 31, 2018 – 47%, 29%, 17% and 7%, respectively). Growth in the U.S. and Canada exposure was largely driven by business growth in loans and acceptances and repo-style transactions, and the impact of foreign exchange translation for U.S. exposures.

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

	As at									
	April 30 2018								January 31 2018	October 31 2017
	Asset type				Client type					
(Millions of Canadian dollars)	Loans Outstanding	Securities (3)	Repo-style transactions	Derivatives	Financials	Sovereign	Corporate	Total	Total	Total
U.K.	$ 7,946	$ 16,374	$ 476	$ 2,105	$ 9,656	$ 9,909	$ 7,336	$ 26,901	$ 26,328	$ 20,503
Germany	2,378	9,775	–	182	4,553	5,059	2,723	12,335	11,720	14,195
France	504	10,461	–	458	1,258	9,105	1,060	11,423	12,183	10,720
Total U.K., Germany, France	$ 10,828	$ 36,610	$ 476	$ 2,745	$ 15,467	$ 24,073	$ 11,119	$ 50,659	$ 50,231	$ 45,418
Ireland	$ 462	$ 54	$ 175	$ 50	$ 233	$ 27	$ 481	$ 741	$ 807	$ 586
Italy	58	58	–	23	62	12	65	139	171	226
Portugal	–	–	–	2	2	–	–	2	9	17
Spain	244	230	–	13	276	–	211	487	389	777
Total Peripheral (4)	$ 764	$ 342	$ 175	$ 88	$ 573	$ 39	$ 757	$ 1,369	$ 1,376	$ 1,606
Luxembourg (5)	$ 1,588	$ 10,494	$ 3	$ 151	$ 692	$ 10,240	$ 1,304	$ 12,236	$ 12,350	$ 6,567
Netherlands (5)	627	2,813	16	135	2,266	321	1,004	3,591	2,832	3,471
Norway	319	2,284	8	–	1,958	341	312	2,611	4,025	4,413
Sweden	434	5,018	4	11	2,921	2,215	331	5,467	4,529	4,726
Switzerland	405	5,573	172	163	904	5,286	123	6,313	4,007	3,533
Other	1,598	1,711	91	176	1,016	1,005	1,555	3,576	3,516	3,510
Total Other Europe	$ 4,971	$ 27,893	$ 294	$ 636	$ 9,757	$ 19,408	$ 4,629	$ 33,794	$ 31,259	$ 26,220
Net exposure to Europe (6)	$ 16,563	$ 64,845	$ 945	$ 3,469	$ 25,797	$ 43,520	$ 16,505	$ 85,822	$ 82,866	$ 73,244

(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 $115 billion against repo-style transactions (January 31, 2018 – $105 billion) and $11.8 billion against derivatives (January 31, 2018 – $13.5 billion).
(3) Securities include $18 billion of trading securities (January 31, 2018 – $17.1 billion), $35.5 billion of deposits (January 31, 2018 – $34 billion), and $11.3 billion of securities carried at FVOCI (January 31, 2018 – $12.6 billion).
(4) Gross credit risk exposure to peripheral Europe is comprised of Ireland $25.6 billion (January 31, 2018 – $26.4 billion), Italy $0.4 billion (January 31, 2018 – $0.3 billion), Portugal $nil (January 31, 2018 – $nil), and Spain $1 billion (January 31, 2018 – $1.5 billion).
(5) Excludes $3.4 billion (January 31, 2018 – $2.8 billion) of exposures to supranational agencies.
(6) Reflects $1.6 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk (January 31, 2018 – $1.6 billion).

Q2 2018 vs. Q1 2018

Net credit risk exposure to Europe increased $3.0 billion from last quarter, largely driven by increased exposure in Switzerland, Sweden and Netherlands, partially offset by decreased exposure in Norway. Our net exposure to peripheral Europe, which includes Ireland, Italy, Portugal and Spain remained minimal, with total outstanding exposure remaining flat during the quarter at $1.4 billion.

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. Total PCL taken on this portfolio during the quarter was $14 million. The gross impaired loans ratio of this loan book was 130 bps, down from 170 bps last quarter.

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

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

	As at April 30, 2018						Home equity lines of credit (1)
	Residential mortgages						
(Millions of Canadian dollars, except percentage amounts)	Insured (2)		Uninsured		Total		Total
Region (3)							
Canada							
Atlantic provinces	$ 7,566	56%	$ 6,001	44%	$ 13,567		$ 1,955
Quebec	14,501	46	17,218	54	31,719		3,837
Ontario	40,774	37	70,749	63	111,523		16,714
Alberta	21,000	57	15,952	43	36,952		6,838
Saskatchewan and Manitoba	9,057	53	8,027	47	17,084		2,554
B.C. and territories	16,186	34	30,943	66	47,129		8,575
Total Canada (4)	$ 109,084	42%	$ 148,890	58%	$ 257,974		$ 40,473
U.S.	1	–	12,311	100	12,312		1,731
Other International	8	–	3,089	100	3,097		1,784
Total International	$ 9	–%	$ 15,400	100%	$ 15,409		$ 3,515
Total	$ 109,093	40%	$ 164,290	60%	$ 273,383		$ 43,988

	As at January 31, 2018						Home equity lines of credit (1)
	Residential mortgages						
(Millions of Canadian dollars, except percentage amounts)	Insured (2)		Uninsured		Total		Total
Region (3)							
Canada							
Atlantic provinces	$ 7,639	56%	$ 5,909	44%	$ 13,548		$ 1,967
Quebec	14,838	47	16,835	53	31,673		3,891
Ontario	42,215	38	68,565	62	110,780		16,643
Alberta	21,670	58	15,805	42	37,475		6,869
Saskatchewan and Manitoba	9,260	54	7,976	46	17,236		2,578
B.C. and territories	16,878	36	30,222	64	47,100		8,544
Total Canada (4)	$ 112,500	44%	$ 145,312	56%	$ 257,812		$ 40,492
U.S.	1	–	11,406	100	11,407		1,591
Other International	9	–	2,964	100	2,973		1,894
Total International	$ 10	–%	$ 14,370	100%	$ 14,380		$ 3,485
Total	$ 112,510	41%	$ 159,682	59%	$ 272,192		$ 43,977

(1) Home equity lines of credit include revolving and non-revolving loans.
(2) Insured residential mortgages are mortgages whereby our exposure to default is mitigated by insurance through the Canada Mortgage and Housing Corporation (CMHC) or other private mortgage default insurers.
(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) Total consolidated residential mortgages in Canada of $258 billion (January 31, 2018 – $258 billion) is largely comprised of $235 billion (January 31, 2018 – $233 billion) of residential mortgages and $7 billion (January 31, 2018 – $7 billion) of mortgages with commercial clients, of which $4 billion (January 31, 2018 – $4 billion) are insured mortgages, both in Canadian Banking, and $16 billion (January 31, 2018 – $18 billion) of residential mortgages in Capital Markets held for securitization purposes.

Home equity lines of credit are uninsured and reported within the personal loan category. As at April 30, 2018, home equity lines of credit in Canadian Banking were $40 billion (January 31, 2018 – $40 billion). Approximately 98% of these home equity lines of credit (January 31, 2018 – 98%) are secured by a first lien on real estate, and only 7% (January 31, 2018 – 7%) of the total homeline clients pay the scheduled interest payment only.

Residential mortgages portfolio by amortization period

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

	As at					
	April 30 2018			January 31 2018		
	Canada	U.S. and Other International	Total	Canada	U.S. and Other International	Total
Amortization period						
≤ 25 years	72%	42%	70%	72%	43%	70%
> 25 years ≤ 30 years	24	58	26	24	57	26
> 30 years ≤ 35 years	4	–	4	4	–	4
Total	100%	100%	100%	100%	100%	100%

Average loan-to-value (LTV) ratio for newly originated and acquired uninsured residential mortgages and homeline products

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 2018		January 31 2018		April 30 2018	
	Uninsured		Uninsured		Uninsured	
	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)	Residential mortgages (1)	Homeline products (2)
Region (3)						
Atlantic provinces	73%	74%	74%	74%	74%	74%
Quebec	73	73	72	73	72	73
Ontario	70	67	70	67	70	67
Alberta	72	72	74	71	73	71
Saskatchewan and Manitoba	74	74	74	74	74	74
B.C. and territories	67	64	68	64	67	64
U.S.	74	n.m.	69	n.m.	72	n.m.
Other International	60	n.m.	59	n.m.	60	n.m.
Average of newly originated and acquired for the period (4), (5)	70%	68%	70%	68%	70%	68%
Total Canadian Banking residential mortgages portfolio (6)	55%	50%	55%	50%	55%	50%

(1) Residential mortgages exclude residential mortgages within the homeline products.
(2) Homeline products are comprised of both residential mortgages and home equity lines of credit.
(3) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
(4) The average LTV ratio for newly originated and acquired uninsured residential mortgages and homeline products is calculated on a weighted basis by mortgage amounts at origination.
(5) For newly originated mortgages and homeline products, LTV is calculated based on the total facility amount for the residential mortgage and homeline product divided by the value of the related residential property.
(6) Weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index.
n.m. not meaningful

We employ a risk-based approach to property valuation. Property valuation methods include automated valuation models (AVM) and appraisals. An AVM is a tool that estimates the value of a property by reference to market data including sales of comparable properties and price trends specific to the Metropolitan Statistical Area in which the property being valued is located. Using a risk-based approach, we also employ appraisals which can include drive-by or full on-site appraisals.

We continue to actively manage our entire mortgage portfolio and perform stress testing, based on a combination of increasing unemployment, rising interest rates and a downturn in real estate markets.

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.

Effective November 1, 2017, we adopted IFRS 9. Under IFRS 9, credit loss allowances and provisions are applied to impaired financial assets as well as performing financial assets. Credit loss allowances and provisions relating to periods prior to November 1, 2017 are not directly comparable to current period results, as prior periods do not include corresponding credit loss allowances or provisions on performing financial assets. Refer to Note 2 of our Condensed Financial Statements for further details.

For more information on key economic drivers impacting our credit loss allowances and provisions, refer to Note 5 of our Condensed Financial Statements.

Provision for (recovery of) credit loss

	IFRS 9		IAS 39	IFRS 9	IAS 39
	For the three months ended			For the six months ended	
(Millions of Canadian dollars, except percentage amounts)	April 30 2018	January 31 2018	April 30 2017	April 30 2018	April 30 2017
Personal & Commercial Banking	$ 306	$ 312	$ 262	$ 618	$ 511
Wealth Management	(20)	(2)	15	(22)	28
Capital Markets	(9)	25	24	16	56
Corporate Support and Other (1)	1	(1)	1	–	1
PCL – Loans	$ 278	$ 334	$ 302	$ 612	$ 596
PCL – Other financial assets	(4)	–		(4)	
Total PCL	$ 274	$ 334	$ 302	$ 608	$ 596
Retail	$ 26	$ 20		$ 46	
Wholesale	(46)	(11)		(57)	
PCL on performing loans (2)	$ (20)	$ 9	$ –	$ (11)	$ –
Retail	$ 259	$ 245	$ 235	$ 504	$ 467
Wholesale	39	80	67	119	129
PCL on impaired loans (3)	$ 298	$ 325	$ 302	$ 623	$ 596
PCL – Loans	$ 278	$ 334	$ 302	$ 612	$ 596
PCL ratio – Loans (4)	0.20%	0.24%	0.23%	0.22%	0.22%
PCL on impaired loans ratio (5)	0.22%	0.23%	0.23%	0.23%	0.22%
Additional information by geography					
Canada (6)					
Residential mortgages	$ 7	$ 10	$ 9	$ 17	$ 15
Personal	107	113	100	220	209
Credit cards	119	107	109	226	217
Small business	8	7	8	15	15
Retail	241	237	226	478	456
Wholesale	21	34	28	55	39
PCL on impaired loans (3)	$ 262	$ 271	$ 254	$ 533	$ 495
U.S. (6), (7)					
Retail	$ 1	$ 1	$ 1	$ 2	$ 1
Wholesale	1	22	42	23	84
PCL on impaired loans (3)	$ 2	$ 23	$ 43	$ 25	$ 85
Other International (6), (7)					
Retail	$ 17	$ 7	$ 8	$ 24	$ 10
Wholesale	17	24	(3)	41	6
PCL on impaired loans (3)	$ 34	$ 31	$ 5	$ 65	$ 16
PCL on impaired loans (3)	$ 298	$ 325	$ 302	$ 623	$ 596

(1) Amounts from periods prior to November 1, 2017 are primarily comprised of PCL for loans not yet identified as impaired. For further information, refer to the How we measure and report our business segments section.
(2) Represents Stage 1 and 2 PCL on loans, acceptances, and commitments under IFRS 9 and PCL for loans not yet identified as impaired under IAS 39.
(3) Represents Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39.
(4) PCL ratio – Loans is calculated using PCL on Loans as a percentage of average net loans and acceptances.
(5) PCL on impaired loans ratio is calculated using PCL on impaired loans as a percentage of average net loans and acceptances. PCL on impaired loans represents Stage 3 PCL on loans, acceptances, and commitments under IFRS 9 and PCL on impaired loans under IAS 39.
(6) Geographic information is based on residence of borrower.
(7) Includes acquired credit-impaired loans.

Q2 2018 vs. Q2 2017

Total PCL was $274 million. PCL on loans of $278 million decreased $24 million, or 8% from the prior year, mainly due to lower provisions in Wealth Management and Capital Markets, partially offset by higher provisions in Personal & Commercial Banking. The PCL ratio on loans of 20 bps improved 3 bps.

PCL on performing loans of ($20) million this quarter was primarily attributable to Capital Markets and Wealth Management, partially offset by provisions in Personal & Commercial Banking.

PCL on impaired loans of $298 million is $4 million lower than the prior year, mainly due to lower provisions in Wealth Management and Capital Markets, partially offset by higher provisions in Personal & Commercial Banking.

PCL on loans in Personal & Commercial Banking increased $44 million, or 17%, reflecting an increase in provisions on performing loans in the Canadian Personal Banking portfolios due to volume growth. Higher provisions on impaired loans in the Caribbean Banking and Canadian Banking portfolios also contributed to the increase.

PCL on loans in Wealth Management of ($20) million, compared to $15 million in the prior year, was primarily due to repayments and maturities, partially offset by volume growth, on performing loans. Lower impaired loans in U.S. Wealth Management (including City National) also contributed to the decrease.

PCL on loans in Capital Markets of ($9) million, compared to $24 million in the prior year, was due to changes in economic drivers impacting performing loans in our wholesale portfolios. Lower provisions on impaired loans, mainly due to lower provisions in the oil & gas sector in the current quarter, partially offset by a provision taken on one account in the consumer goods sector, also contributed to the decrease.

Q2 2018 vs. Q1 2018

PCL on loans of $278 million decreased $56 million, or 17% from the prior quarter, mainly due to lower provisions in Capital Markets and Wealth Management. PCL ratio on loans improved 4 bps.

PCL on performing loans of ($20) million, compared to a provision of $9 million in the prior quarter, was primarily due to a decrease in provisions in Wealth Management and Personal & Commercial Banking.

PCL on impaired loans of $298 million decreased $27 million from the prior quarter, mainly due to lower provisions in Capital Markets.

PCL on loans in Personal & Commercial Banking decreased $6 million mainly due to a decrease in provisions on performing loans in the Canadian Personal Banking portfolio, partially offset by an increase in provisions on impaired loans in the Caribbean Banking portfolio.

PCL on loans in Wealth Management of ($20) million, compared to ($2) million in the prior quarter, was primarily due to repayments and maturities on performing loans in U.S. Wealth Management (including City National), partially offset by volume growth.

PCL on loans in Capital Markets decreased $34 million, primarily driven by lower provisions on impaired loans.

Q2 2018 vs. Q2 2017 (Six months ended)

PCL on loans increased $16 million, or 3% from the prior year, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management and Capital Markets. PCL ratio on loans remained flat.

PCL on performing loans of ($11) million this year was primarily attributable to Capital Markets and Wealth Management, partially offset by provisions in Personal & Commercial Banking.

PCL on impaired loans of $623 million increased $27 million from the prior year, mainly due to higher provisions in Personal & Commercial Banking, partially offset by lower provisions in Wealth Management.

PCL on loans in Personal & Commercial Banking increased $107 million, or 21%, mainly due to the adoption of IFRS 9, which led to provisions on performing loans, and higher provisions on impaired loans in the Canadian Banking and Caribbean Banking portfolios.

PCL on loans in Wealth Management of ($22) million, compared to $28 million in the prior year, was primarily due to repayments and maturities, partially offset by volume growth, on performing loans since the adoption of IFRS 9. Lower impaired loans in U.S. Wealth Management (including City National) also contributed to the decrease.

PCL on loans in Capital Markets decreased $40 million, primarily due to changes in economic drivers impacting performing loans in our wholesale portfolios since the adoption of IFRS 9.

Gross impaired loans (GIL)

	IFRS 9		IAS 39
	As at		
(Millions of Canadian dollars, except percentage amounts)	April 30 2018	January 31 2018	April 30 2017
Personal & Commercial Banking	$ 1,755	$ 1,713	$ 1,543
Wealth Management (1)	228	273	706
Capital Markets	672	541	984
Investor & Treasury Services	–	–	–
Corporate Support and Other	–	–	16
Total GIL (2)	$ 2,655	$ 2,527	$ 3,249
Canada (3)			
Retail	$ 722	$ 715	$ 611
Wholesale	527	518	405
GIL	1,249	1,233	1,016
U.S. (1), (3)			
Retail	$ 37	$ 39	$ 76
Wholesale	497	386	1,243
GIL	534	425	1,319
Other International (3)			
Retail	$ 343	$ 327	$ 373
Wholesale	529	542	541
GIL	872	869	914
Total GIL (2)	$ 2,655	$ 2,527	$ 3,249
Impaired loans, beginning balance	$ 2,527	$ 2,576	$ 3,559
Classified as impaired during the period (new impaired) (4)	594	694	601
Net repayments (4)	(133)	(126)	(220)
Amounts written off	(346)	(321)	(354)
Other (1), (2), (4), (5)	13	(296)	(337)
Impaired loans, balance at end of period	$ 2,655	$ 2,527	$ 3,249
GIL ratio (6)			
Total GIL ratio	0.47%	0.45%	0.59%
Personal & Commercial Banking	0.41%	0.41%	0.39%
Canadian Banking	0.29%	0.29%	0.25%
Caribbean Banking	6.63%	6.44%	6.87%
Wealth Management	0.41%	0.52%	1.36%
Capital Markets	0.80%	0.67%	1.18%

(1) Effective November 1, 2017, GIL excludes $229 million of ACI loans related to our acquisition of City National Bank (City National) that have returned to performing status. As at April 30, 2018, $21 million (January 31, 2018 – $24 million) of ACI loans that remain impaired are included in GIL. As at April 30, 2017, GIL includes $331 million related to the ACI loans portfolio from our acquisition of City National. ACI loans included in GIL added 6 bps to our April 30, 2017 GIL ratio. For further details, refer to Note 5 of our Condensed Financial Statements.
(2) Effective November 1, 2017, the definition of gross impaired loans has been shortened for certain products to align with a definition of default of 90 days past due under IFRS 9, resulting in an increase in GIL of $134 million.
(3) Geographic information is based on residence of borrower.
(4) 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 Exchange and other movements amounts are not reasonably determinable.
(5) Includes Return to performing status during the period, Recoveries of loans and advances previously written off, Sold, and Exchange and other movements.
(6) GIL as a % of related loans and acceptances.

Q2 2018 vs. Q2 2017

Total GIL of $2,655 million decreased $594 million or 18% from the prior year, and the total GIL ratio of 47 bps improved 12 bps, largely reflecting lower impaired loans in Wealth Management and Capital Markets, partially offset by higher impaired loans in Personal & Commercial Banking.

GIL in Personal & Commercial Banking increased $212 million or 14%, with $141 million of the increase due to a change in the definition of impaired under IFRS 9, effective November 1, 2017, for certain products in our Canadian Personal Banking portfolios. Higher impaired loans in our Canadian Business Banking portfolios also contributed to the increase.

GIL in Wealth Management decreased $478 million or 68%. This mainly reflects fewer impaired loans in U.S. Wealth Management (including City National) due to the exclusion of $229 million in ACI loans that have returned to performing status since our acquisition of City National and a change in the definition of impaired for certain products effective November 1, 2017.

GIL in Capital Markets decreased $312 million or 32%, mainly due to lower impaired loans across a few sectors compared to prior year.

Q2 2018 vs. Q1 2018

Total GIL increased $128 million or 5% from the prior quarter, and the total GIL ratio of 47 bps increased 2 bps.

GIL in Personal & Commercial Banking increased $42 million or 2% from the prior quarter, mainly due to higher impaired loans in our Caribbean Banking and Canadian Business Banking portfolios.

GIL in Wealth Management decreased $45 million or 16%, mainly due to a repayment on one account in International Wealth Management and loans returning to performing status within U.S. Wealth Management (including City National).

GIL in Capital Markets increased $131 million or 24%, mainly due to higher impaired loans on a few accounts in the oil & gas sector.

Allowance for credit losses (ACL)

	IFRS 9		IAS 39
	As at		
(Millions of Canadian dollars)	April 30 2018	January 31 2018	April 30 2017
Personal & Commercial Banking	$ 2,478	$ 2,426	$ 494
Wealth Management	197	218	93
Capital Markets	353	350	241
Investor & Treasury Services	2	1	–
Corporate Support & Other (1)	–	–	1,521
ACL on loans	$ 3,030	$ 2,995	$ 2,349
ACL on other financial assets	104	103	
Total ACL	$ 3,134	$ 3,098	$ 2,349
ACL on loans is comprised of:			
ACL on performing loans (2)	$ 2,242	$ 2,242	$ 1,520
ACL on impaired loans (3)	788	753	829
ACL on loans			
Retail	$ 1,678	$ 1,643	
Wholesale	564	599	
ACL on performing loans (2)	$ 2,242	$ 2,242	$ 1,520
Canada (4)			
Retail	$ 152	$ 153	$ 145
Wholesale	141	140	121
ACL on impaired loans (3)	$ 293	$ 293	$ 266
U.S. (4)			
Retail	$ 2	$ 1	$ 1
Wholesale	137	135	209
ACL on impaired loans (3)	$ 139	$ 136	$ 210
Other International (4)			
Retail	$ 171	$ 157	$ 180
Wholesale	185	167	173
ACL on impaired loans (3)	$ 356	$ 324	$ 353
ACL on impaired loans (3)	$ 788	$ 753	$ 829

(1) Prior period amounts in Corporate Support primarily comprised of Allowance for loans not yet identified as impaired. Under IFRS 9, Stage 1 and Stage 2 ACL are recorded within the respective business segment. For further information, refer to the How we measure and report our business segments section.
(2) Represents Stage 1 and Stage 2 ACL on loans, acceptances, and commitments under IFRS 9 and Allowance for loans not yet identified as impaired under IAS 39.
(3) Represents Stage 3 ACL on loans, acceptances, and commitments under IFRS 9 and Allowance for impaired loans under IAS 39.
(4) Geographic information is based on residence of borrower.

Q2 2018 vs. Q2 2017

Total ACL of $3,134 million increased $785 million or 33% from the prior year, reflecting an increase of $681 million in ACL on loans and the inclusion of $104 million in ACL on other financial assets primarily due to the adoption of IFRS 9.

ACL on performing loans of $2,242 million is $722 million higher than the Allowance for loans not yet identified as impaired of $1,520 million in the prior year. The increase is due to the adoption of IFRS 9, and primarily reflects higher ACL on loans in the Canadian Personal Banking portfolios.

ACL on impaired loans of $788 million decreased $41 million from prior year, primarily due to lower ACL on loans in Wealth Management and Capital Markets, partially offset by higher ACL in Personal & Commercial Banking.

Q2 2018 vs. Q1 2018

Total ACL of $3,134 million increased $36 million or 1% from the prior quarter, reflecting an increase of $35 million in ACL on loans and $1 million in ACL on other financial assets.

ACL on performing loans of $2,242 million remained flat compared to the prior quarter.

ACL on impaired loans of $788 million increased $35 million from prior quarter, primarily due to higher ACL on loans in Capital Markets and Personal & Commercial Banking, partially offset by lower ACL on loans in Wealth Management.

For further details, refer to Notes 2 and 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 2017 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). For further details of our approach to the management of market risk, refer to the Market risk section of our 2017 Annual Report.

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, 12-month Net Interest Income (NII) risk and Economic Value of Equity (EVE) risk, under a range of market shocks and scenarios. There has been no material change to the SIRR measurement methodology, controls, or limits from those described in our 2017 Annual Report.

Market risk measures – FVTPL positions

VaR and SVaR

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

	April 30, 2018				January 31, 2018		April 30, 2017	
		For the three months ended				For the three months ended		For the three months ended
(Millions of Canadian dollars)	As at	Average	High	Low	As at	Average	As at	Average
Equity	$ 9	$ 15	$ 27	$ 8	$ 15	$ 16	$ 13	$ 13
Foreign exchange	5	4	5	2	3	3	4	4
Commodities	2	1	2	1	1	2	3	4
Interest rate (1)	16	21	30	13	12	17	18	18
Credit specific (2)	5	5	6	5	5	5	4	4
Diversification (3)	(17)	(18)	n.m.	n.m.	(14)	(18)	(15)	(18)
Market risk VaR	$ 20	$ 28	$ 38	$ 20	$ 22	$ 25	$ 27	$ 25
Market risk Stressed VaR	$ 61	$ 97	$ 149	$ 61	$ 84	$ 81	$ 47	$ 50

	April 30, 2018				April 30, 2017	
		For the six months ended				For the six months ended
(Millions of Canadian dollars)	As at	Average	High	Low	As at	Average
Equity	$ 9	$ 15	$ 27	$ 8	$ 13	$ 13
Foreign exchange	5	3	5	2	4	4
Commodities	2	2	3	1	3	3
Interest rate (1)	16	19	30	12	18	17
Credit specific (2)	5	5	6	4	4	4
Diversification (3)	(17)	(18)	n.m.	n.m.	(15)	(17)
Market risk VaR	$ 20	$ 26	$ 38	$ 17	$ 27	$ 24
Market risk Stressed VaR	$ 61	$ 89	$ 149	$ 40	$ 47	$ 53

(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 2018 vs. Q2 2017

Average market risk VaR of $28 million increased $3 million from the prior year, largely due to the change in classification of certain equity and interest rate-sensitive portfolios from available-for-sale to FVTPL as a result of adopting IFRS 9. Growth in certain fixed income portfolios, and higher average equity exposures mainly attributable to increased market volatility also contributed to the increase.

Average SVaR of $97 million increased $47 million from the prior year, mainly due to the inclusion of certain equity and debt portfolios due to the change in classification as a result of adopting IFRS 9 and higher equity exposures as mentioned above. Expiries and repurchases of certain hedging instruments in our equity derivatives trading portfolio contributed to volatility during the quarter.

Q2 2018 vs. Q1 2018

Average market risk VaR of $28 million increased $3 million from the prior quarter, largely driven by growth in certain fixed income portfolios as reflected in our Interest rate VaR.

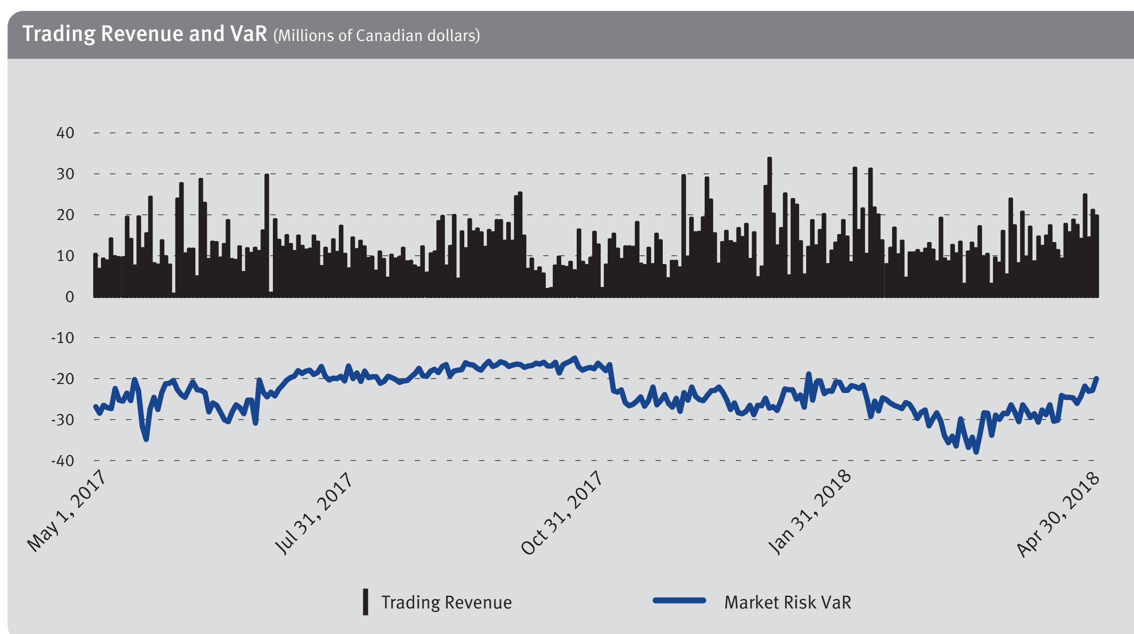
Average SVaR of $97 million increased $16 million from the prior quarter, mainly due to higher average fixed income inventories as noted above, partially offset by lower inventory in certain legacy portfolios. Expiries and repurchases of certain hedging instruments in our equity derivatives trading portfolio contributed to volatility during the quarter.

Q2 2018 vs. Q2 2017 (Six months ended)

Average market risk VaR of $26 million increased $2 million compared to the prior year, largely driven by the change in classification as a result of adopting IFRS 9, and higher fixed income and equity exposures as noted above.

Average SVaR of $89 million increased $36 million compared to the prior year, mainly reflecting the factors noted above under Average market risk VaR. Expiries and repurchases of certain hedging instruments in our equity derivatives trading portfolio contributed to volatility during the year.

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, 2018 and January 31, 2018.



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, 2018, we had liabilities with respect to insurance obligations of $9.8 billion, down from $10.0 billion in the prior quarter, and trading securities of $7.9 billion in support of the liabilities, unchanged from $7.9 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.

	April 30 2018						January 31 2018		April 30 2017	
	EVE risk			NII risk (1)						
(Millions of Canadian dollars)	Canadian dollar impact	U.S. dollar impact (2)	Total	Canadian dollar impact	U.S. dollar impact (2)	Total	EVE risk	NII risk (1)	EVE risk	NII risk (1)
Before-tax impact of:										
100bps increase in rates	$ (1,034)	$ (52)	$ (1,086)	$ 394	$ 161	$ 555	$ (1,224)	$ 458	$ (1,208)	$ 471
100bps decrease in rates	907	(238)	669	(478)	(178)	(656)	809	(578)	655	(577)

(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, 2018, an immediate and sustained -100 bps shock would have had a negative impact to our NII of $656 million, up from $578 million last quarter. An immediate and sustained +100 bps shock at the end of April 30, 2018 would have had a negative impact to the Bank's EVE of $1,086 million, down from $1,224 million reported last quarter. The quarter-over-quarter increase in NII risk was largely attributed to higher asset sensitivity in Canadian dollars, associated with growth in capital and low cost deposits during the quarter. During the second quarter of 2018, 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 $42.7 billion of investment securities carried at FVOCI as at April 30, 2018 compared to $47.5 billion in the prior quarter. The quarter-over-quarter decrease was largely driven by reductions in fixed income holdings. We hold debt securities carried at FVOCI primarily as investments, as well as to manage liquidity risk and hedge interest rate risk in our non-trading banking balance sheet. As at April 30, 2018, our portfolio of investment securities carried at FVOCI is interest rate sensitive and would impact OCI by a pre-tax change in value of $8 million as measured by the change in the value of the securities for a one basis point parallel increase in yields.

The portfolio also exposes us to credit spread risk of a pre-tax change in value of $18 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, 2018 was $8.6 billion, down from $9.7 billion in the prior quarter. Our investment securities carried at FVOCI also include equity exposures of $0.4 billion as at April 30, 2018, unchanged from the prior 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 $3.5 billion as at April 30, 2018 were down from $3.7 billion last quarter, and derivative liabilities of $2.9 billion as at April 30, 2018 were down from $3.3 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 $1.5 billion as at April 30, 2018, down from $1.6 billion as at January 31, 2018, and derivative liabilities of $1.8 billion as at April 30, 2018, up from $1.5 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 $9 million as of April 30, 2018 compared to $7 million as of January 31, 2018.

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 statement 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

Derivatives, including interest rate swaps and foreign exchange derivatives, that are not in designated hedge accounting relationships are used to manage other non-trading exposures. Changes in the fair value of these derivatives are reflected in the Consolidated Statement of Income. Derivative assets of $2.0 billion as at April 30, 2018 were down from $2.1 billion as at January 31, 2018, and derivative liabilities of $1.1 billion as at April 30, 2018 were down from $1.8 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 value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar, due to our operations in the U.S. and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro, due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and 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.

Our overall trading and non-trading market risk objectives, policies and methodologies have not changed significantly from those described in our 2017 Annual Report.

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:

	As at April 30, 2018			
		Market risk measure		
(Millions of Canadian dollars)	Balance sheet amount	Traded risk (1)	Non-traded risk (2)	Non-traded risk primary risk sensitivity
Assets subject to market risk				
Cash and due from banks (3)	$ 32,765	$ –	$ 32,765	Interest rate
Interest-bearing deposits with banks (4)	36,979	18,626	18,353	Interest rate
Securities				
Trading (5)	131,168	123,307	7,861	Interest rate, credit spread
Investment, net of applicable allowance (6)	89,673	–	89,673	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	261,184	188,842	72,342	Interest rate
Loans				
Retail (8)	388,558	5,832	382,726	Interest rate
Wholesale (9)	165,643	7,255	158,388	Interest rate
Allowance for loan losses	(2,808)	–	(2,808)	Interest rate
Segregated fund net assets (10)	1,308	–	1,308	Interest rate
Derivatives	94,175	90,672	3,503	Interest rate, foreign exchange
Other assets (11)	70,281	2,847	67,434	Interest rate
Assets not subject to market risk (12)	5,852			
Total assets	$ 1,274,778	$ 437,381	$ 831,545	
Liabilities subject to market risk				
Deposits (13)	$ 822,048	$ 81,118	$ 740,930	Interest rate
Segregated fund liabilities (14)	1,308	–	1,308	Interest rate
Other				
Obligations related to securities sold short	33,047	33,047	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	170,918	164,152	6,766	Interest rate
Derivatives	90,890	88,011	2,879	Interest rate, foreign exchange
Other liabilities (16)	65,566	5,249	60,317	Interest rate
Subordinated debentures	9,068	–	9,068	Interest rate
Preferred share liabilities	–	–	–	
Liabilities not subject to market risk (17)	5,908			
Total liabilities	$ 1,198,753	$ 371,577	$ 821,268	
Total equity	$ 76,025			
Total liabilities and equity	$ 1,274,778			

(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.
The following footnotes provide additional information on the Non-traded risk amounts:
(3) Cash and due from banks includes $23,925 million included in SIRR. An additional $8,840 million is included in other risk controls.
(4) Interest-bearing deposits with banks of $18,353 million are included in SIRR.
(5) Trading securities include $7,861 million in securities for asset/liability management of RBC Insurance.
(6) Includes investment securities carried at FVOCI of $42,668 million and investment securities, net of applicable allowance, carried at amortized cost of $47,005 million. $55,626 million of the total securities are included in SIRR. An additional $2,073 million are held by RBC Insurance. The remaining $31,974 million are captured in other internal non-trading market risk reporting.
(7) Assets purchased under reverse repurchase agreements include $34,487 million reflected in SIRR. An additional $37,855 million is included in other risk controls.
(8) Retail loans include $371,591 million reflected in SIRR and $284 million is used for asset/liability management of RBC Insurance. An additional $10,851 million is included in other risk controls.
(9) Wholesale loans include $156,626 million reflected in SIRR. An additional $1,762 million is used for asset/liability management of RBC Insurance.
(10) Investments for the account of segregated fund holders are included in RBC Insurance risk measures.
(11) Other assets include $41,604 million reflected in SIRR and $2,478 million is used for asset/liability management of RBC Insurance. An additional $23,352 million is included in other risk controls.
(12) Assets not subject to market risk include $5,852 million of physical and other assets.
(13) Deposits include $660,214 million reflected in SIRR. The remaining $80,716 million are captured in other internal non-trading market risk reporting.
(14) Insurance and investment contracts for the account of segregated fund holders are included in RBC Insurance risk measures.
(15) Obligations related to assets sold under repurchase agreements and securities loaned include $242 million reflected in SIRR. An additional $6,524 million is included in other risk controls.
(16) Other liabilities include $37,306 million reflected in SIRR and $10,698 million of RBC Insurance liabilities. An additional $12,313 million is included in other risk controls.
(17) Liabilities not subject to market risk include $5,908 million of payroll related and other liabilities.

	As at January 31, 2018			
		Market risk measure		
(Millions of Canadian dollars)	Balance sheet amount	Traded risk (1)	Non-traded risk (2)	Non-traded risk primary risk sensitivity
Assets subject to market risk				
Cash and due from banks (3)	$ 34,488	$ –	$ 34,488	Interest rate
Interest-bearing deposits with banks (4)	37,269	18,877	18,392	Interest rate
Securities				
Trading (5)	129,361	121,502	7,859	Interest rate, credit spread
Investment, net of applicable allowance (6)	92,901	–	92,901	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	259,765	185,185	74,580	Interest rate
Loans				
Retail (8)	386,235	7,777	378,458	Interest rate
Wholesale (9)	154,585	9,395	145,190	Interest rate
Allowance for loan losses	(2,776)	–	(2,776)	Interest rate
Segregated fund net assets (10)	1,270	–	1,270	Interest rate
Derivatives	105,512	101,844	3,668	Interest rate, foreign exchange
Other assets (11)	72,391	2,203	70,188	Interest rate
Assets not subject to market risk (12)	5,274			
Total assets	$ 1,276,275	$ 446,783	$ 824,218	
Liabilities subject to market risk				
Deposits (13)	$ 800,020	$ 83,239	$ 716,781	Interest rate
Segregated fund liabilities (14)	1,270	–	1,270	Interest rate
Other				
Obligations related to securities sold short	30,404	30,404	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	183,319	177,526	5,793	Interest rate
Derivatives	104,219	100,923	3,296	Interest rate, foreign exchange
Other liabilities (16)	69,552	4,018	65,534	Interest rate
Subordinated debentures	8,961	–	8,961	Interest rate
Preferred share liabilities	–	–	–	
Liabilities not subject to market risk (17)	5,206			
Total liabilities	$ 1,202,951	$ 396,110	$ 801,635	
Total equity	$ 73,324			
Total liabilities and equity	$ 1,276,275			

(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.
The following footnotes provide additional information on the Non-traded risk amounts:
(3) Cash and due from banks includes $22,803 million included in SIRR. An additional $11,685 million is included in other risk controls.
(4) Interest-bearing deposits with banks of $18,392 million are included in SIRR.
(5) Trading securities include $7,859 million in securities for asset/liability management of RBC Insurance.
(6) Includes investment securities carried at FVOCI of $47,543 million and investment securities, net of applicable allowance, carried at amortized cost of $45,358 million. $55,091 million of the total securities are included in SIRR. An additional $2,053 million are held by RBC Insurance. The remaining $35,757 million are captured in other internal non-trading market risk reporting.
(7) Assets purchased under reverse repurchase agreements include $32,684 million reflected in SIRR. An additional $41,896 million is included in other risk controls.
(8) Retail loans include $367,702 million reflected in SIRR and $261 million is used for asset/liability management of RBC Insurance. An additional $10,495 million is included in other risk controls.
(9) Wholesale loans include $143,449 million reflected in SIRR. An additional $1,741 million is used for asset/liability management of RBC Insurance.
(10) Investments for the account of segregated fund holders are included in RBC Insurance risk measures.
(11) Other assets include $42,100 million reflected in SIRR and $2,317 million is used for asset/liability management of RBC Insurance. An additional $25,771 million is included in other risk controls.
(12) Assets not subject to market risk include $5,274 million of physical and other assets.
(13) Deposits include $648,512 million reflected in SIRR. The remaining $68,269 million are captured in other internal non-trading market risk reporting.
(14) Insurance and investment contracts for the account of segregated fund holders are included in RBC Insurance risk measures.
(15) Obligations related to assets sold under repurchase agreements and securities loaned include $776 million reflected in SIRR. An additional $5,017 million is included in other risk controls.
(16) Other liabilities include $38,899 million reflected in SIRR and $10,648 million of RBC Insurance liabilities. An additional $15,987 million is included in other risk controls.
(17) Liabilities not subject to market risk include $5,206 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 sufficient liquidity resources to satisfy current and prospective commitments in both business-as-usual and stressed conditions. There have been no material changes to our LRMF as described in our 2017 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 our liquidity reserve.

	As at April 30, 2018				
(Millions of Canadian dollars)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and due from banks	$ 32,765	$ –	$ 32,765	$ 3,026	$ 29,739
Interest-bearing deposits with banks	36,979	–	36,979	386	36,593
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	178,026	211,077	389,103	259,835	129,268
Other securities	76,084	115,505	191,589	57,964	133,625
Undrawn credit lines granted by central banks (2)	11,957	–	11,957	–	11,957
Other assets eligible as collateral for discount (3)	99,090	–	99,090	–	99,090
Other liquid assets (4)	19,102	–	19,102	18,076	1,026
Total liquid assets	**$ 454,003**	**$ 326,582**	**$ 780,585**	**$ 339,287**	**$ 441,298**

	As at January 31, 2018				
(Millions of Canadian dollars) (5)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and due from banks	$ 34,488	$ –	$ 34,488	$ 2,668	$ 31,820
Interest-bearing deposits with banks	37,269	–	37,269	396	36,873
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (1)	161,422	216,420	377,842	254,505	123,337
Other securities	91,234	109,069	200,303	60,507	139,796
Undrawn credit lines granted by central banks (2)	10,830	–	10,830	–	10,830
Other assets eligible as collateral for discount (3)	94,479	–	94,479	–	94,479
Other liquid assets (4)	22,359	–	22,359	21,633	726
Total liquid assets	$ 452,081	$ 325,489	$ 777,570	$ 339,709	$ 437,861

	As at	
(Millions of Canadian dollars)	April 30 2018	January 31 2018 (5)
Royal Bank of Canada	$ 223,332	$ 226,962
Foreign branches	64,285	61,554
Subsidiaries	153,681	149,345
Total unencumbered liquid assets	**$ 441,298**	$ 437,861

(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 (Federal Reserve Bank). Amounts are face value and would be subject to collateral margin requirements applied by the Federal Reserve Bank to determine collateral value/borrowing capacity. Access to the discount window borrowing program is conditional on meeting requirements set by the Federal Reserve Bank and borrowings are typically expected to be infrequent and due to uncommon occurrences requiring temporary accommodation.

(3) Represents our unencumbered Canadian dollar non-mortgage loan book (at face value) that could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the BoC for advances under its Emergency Lending Assistance (ELA) program. It also includes our unencumbered mortgage loans that qualify as eligible collateral at Federal Home Loan Bank (FHLB). ELA and FHLB are not considered sources 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.

(4) Encumbered liquid assets amount represents cash collateral and margin deposits amounts pledged related to OTC and exchange-traded derivative transactions.

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

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 2018 vs. Q1 2018

Total liquid assets increased $3.0 billion, primarily due to higher Other assets eligible as collateral for discount resulting from volume growth in eligible wholesale loans and residential mortgages under the ELA and FHLB. This was largely offset by a decrease in Other liquid assets reflecting lower cash collateral requirements.

Asset encumbrance

The table below provides a summary of cash, securities and other assets, distinguishing between those that are encumbered assets and those available for sale or use as collateral in secured funding transactions. Other assets, such as mortgages and credit card receivables can also be monetized, although over a longer timeframe than that required for marketable securities. As at April 30, 2018, our Unencumbered assets available as collateral comprised 32% of our total assets (January 31, 2018 – 31%).

Asset encumbrance

	As at									
	April 30 2018					January 31 2018 (1)				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
(Millions of Canadian dollars)	Pledged as collateral	Other (2)	Available as collateral (3)	Other (4)	Total	Pledged as collateral	Other (2)	Available as collateral (3)	Other (4)	Total
Cash and due from banks	$ –	$ 3,026	$ 29,739	$ –	$ 32,765	$ –	$ 2,668	$ 31,820	$ –	$ 34,488
Interest-bearing deposits with banks	–	386	36,593	–	36,979	–	396	36,873	–	37,269
Securities										
Trading	46,630	–	80,912	3,626	131,168	55,683	–	69,901	3,777	129,361
Investment, net of applicable allowance	5,477	–	84,138	58	89,673	5,345	–	87,529	27	92,901
Assets purchased under reverse repurchase agreements and securities borrowed (5)	281,300	21,573	58,941	6,766	368,580	268,132	23,355	64,371	5,180	361,038
Loans										
Retail										
Mortgage securities	34,420	–	32,349	–	66,769	35,189	–	35,490	–	70,679
Mortgage loans	35,562	–	16,895	154,157	206,614	39,665	–	14,722	147,126	201,513
Non-mortgage loans	7,011	–	61,474	46,690	115,175	9,828	–	63,703	40,512	114,043
Wholesale	–	–	33,477	132,166	165,643	–	–	26,884	127,701	154,585
Allowance for loan losses	–	–	–	(2,808)	(2,808)	–	–	–	(2,776)	(2,776)
Segregated fund net assets	–	–	–	1,308	1,308	–	–	–	1,270	1,270
Other – Derivatives	–	–	–	94,175	94,175	–	–	–	105,512	105,512
– Others (6)	18,076	–	1,026	57,030	76,132	21,633	–	726	55,306	77,665
Total assets	$ 428,476	$ 24,985	$ 435,544	$493,168	$ 1,382,173	$ 435,475	$ 26,419	$ 432,019	$ 483,635	$ 1,377,548

(1) Amounts have been revised from those previously presented.
(2) Includes assets restricted from use to generate secured funding due to legal or other constraints.
(3) 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 Federal Reserve Bank of New York. ELA, FHLB, 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.
(4) 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.
(5) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing, derivative transactions, and margin lending. Includes $21.6 billion (January 31, 2018 – $23.4 billion) of collateral received through reverse repurchase transactions that cannot be rehypothecated in its current legal form.
(6) 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, 2018, relationship-based deposits, which are the primary source of funding for retail loans and mortgages, were $532 billion or 52% of our total funding (January 31, 2018 – $522 billion or 51%). The remaining portion is comprised of short- and long-term wholesale funding.

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

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

Long-term debt issuance

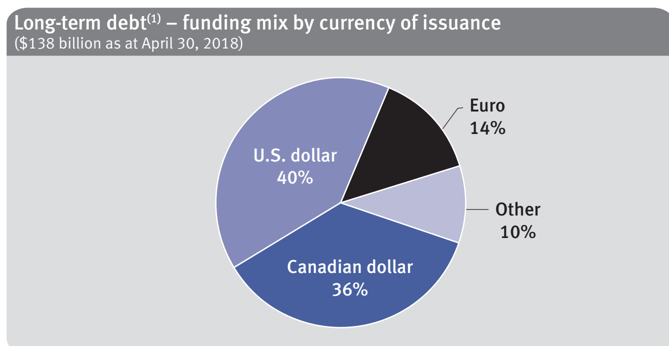
Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and 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
• Canadian Shelf Program – $25 billion	• SEC Shelf Program – US$40 billion	• European Debt Issuance Program – US$40 billion • Global Covered Bond Program – €32 billion • Japanese Issuance Programs – ¥1 trillion

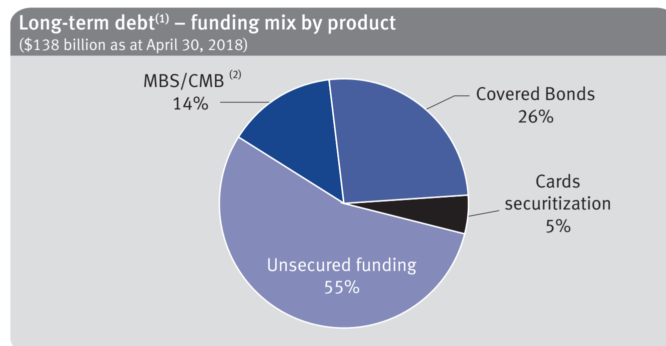
We also raise long-term funding using Canadian Deposit Notes, Canadian National Housing Act MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic 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.

Long-term debt[(1)] – funding mix by currency of issuance
($138 billion as at April 30, 2018)



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

Long-term debt[(1)] – funding mix by product
($138 billion as at April 30, 2018)



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

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

Composition of wholesale funding (1)

	As at April 30, 2018							
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	$ 5,749	$ 48	$ 34	$ 87	$ 5,918	$ –	$ –	$ 5,918
Certificates of deposit and commercial paper	4,314	17,810	16,761	9,958	48,843	–	–	48,843
Asset-backed commercial paper (3)	1,737	3,563	5,840	4,493	15,633	–	–	15,633
Senior unsecured medium-term notes (4)	–	10,308	6,454	13,545	30,307	15,242	34,648	80,197
Senior unsecured structured notes (5)	79	364	1,174	713	2,330	2,210	5,627	10,167
Mortgage securitization	–	559	994	3,004	4,557	3,400	11,602	19,559
Covered bonds/asset-backed securities (6)	–	1,348	4,907	4,642	10,897	11,597	20,148	42,642
Subordinated liabilities	–	–	–	–	–	103	9,192	9,295
Other (7)	7,035	1,155	1,535	1,386	11,111	233	6,577	17,921
Total	$ 18,914	$ 35,155	$ 37,699	$ 37,828	$ 129,596	$ 32,785	$ 87,794	$ 250,175
Of which:								
– Secured	$ 7,717	$ 6,335	$ 11,740	$ 12,139	$ 37,931	$ 14,997	$ 31,750	$ 84,678
– Unsecured	11,197	28,820	25,959	25,689	91,665	17,788	56,044	165,497

	As at January 31, 2018							
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	$ 3,504	$ 114	$ 1	$ 51	$ 3,670	$ –	$ –	$ 3,670
Certificates of deposit and commercial paper	5,876	15,016	14,979	10,203	46,074	295	40	46,409
Asset-backed commercial paper (3)	1,641	3,162	4,866	3,766	13,435	–	–	13,435
Senior unsecured medium-term notes (4)	–	3,405	10,068	12,473	25,946	13,235	38,723	77,904
Senior unsecured structured notes (5)	474	464	456	1,387	2,781	2,283	4,835	9,899
Mortgage securitization	–	1,297	552	3,427	5,276	2,110	12,806	20,192
Covered bonds/asset-backed securities (6)	646	1,100	1,314	4,788	7,848	9,818	25,708	43,374
Subordinated liabilities	–	–	–	–	–	100	9,062	9,162
Other (7)	6,016	1,212	662	1,930	9,820	221	5,059	15,100
Total	$ 18,157	$ 25,770	$ 32,898	$ 38,025	$ 114,850	$ 28,062	$ 96,233	$ 239,145
Of which:								
– Secured	$ 7,559	$ 6,373	$ 6,732	$ 11,980	$ 32,644	$ 11,928	$ 38,514	$ 83,086
– Unsecured	10,598	19,397	26,166	26,045	82,206	16,134	57,719	156,059

(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 $6,844 million (January 31, 2018 – $6,085 million), bearer deposit notes (unsecured) of $4,666 million (January 31, 2018 – $4,115 million) and other long-term structured deposits (unsecured) of $6,411 million (January 31, 2018 – $4,900 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.

The following table presents our major credit ratings(1):

Credit ratings

	As at May 23, 2018		
	Short-term debt	Senior long-term debt	Outlook
Moody's (2)	P-1	A1	negative
Standard & Poor's (3)	A-1+	AA-	negative
Fitch Ratings (4)	F1+	AA	stable
DBRS (5)	R-1(high)	AA	stable

(1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.
(2) On May 10, 2017, Moody's lowered our senior long-term debt rating one notch, along with our large Canadian peers, due to Moody's change to Canada's macroeconomic profile. Moody's also affirmed our negative outlook.
(3) On June 6, 2016, S&P revised our outlook to negative from stable.
(4) On October 27, 2017, Fitch Ratings revised our outlook to stable from negative.
(5) On April 19, 2018, DBRS affirmed our stable outlook. After assessing the impact of the Bail-in regime, DBRS lowered our debt rating on subordinated debt issued prior to 2014 by one notch, along with our large Canadian peers, reflecting the structural subordination to the bail-in instruments. DBRS also noted that a downgrade of any long-term ratings of existing senior obligations is unlikely.

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 presents 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

	As at					
	April 30 2018			January 31 2018		
(Millions of Canadian dollars)	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	$ 59	$ 165	$ 455	$ 55	$ 126	$ 433
Other contractual funding or margin requirements (1)	182	148	–	208	102	–

(1) Includes 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 Office of the Superintendent of Financial Institutions (OSFI) regulatory minimum coverage level for LCR is currently 100%.

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

Liquidity coverage ratio common disclosure template (1)

	For the three-months ended			
	April 30 2018		January 31 2018	
(Millions of Canadian dollars, except percentage amounts)	Total unweighted value (average) (2)	Total weighted value (average)	Total unweighted value (average) (2)	Total weighted value (average)
High-quality liquid assets				
Total high-quality liquid assets (HQLA)		214,242		214,923
Cash outflows				
Retail deposits and deposits from small business customers, of which:	250,010	18,964	249,202	18,876
Stable deposits (3)	86,239	2,587	86,357	2,591
Less stable deposits	163,771	16,377	162,845	16,285
Unsecured wholesale funding, of which:	269,470	121,605	265,804	119,121
Operational deposits (all counterparties) and deposits in networks of cooperative banks (4)	122,645	29,226	120,507	28,792
Non-operational deposits	126,571	72,125	127,323	72,355
Unsecured debt	20,254	20,254	17,974	17,974
Secured wholesale funding		24,091		23,457
Additional requirements, of which:	242,501	77,741	231,561	75,102
Outflows related to derivative exposures and other collateral requirements	66,010	44,523	62,181	43,568
Outflows related to loss of funding on debt products	5,484	5,484	5,574	5,574
Credit and liquidity facilities	171,007	27,734	163,806	25,960
Other contractual funding obligations (5)	43,575	43,575	40,587	40,587
Other contingent funding obligations (6)	439,419	7,291	440,710	7,226
Total cash outflows		293,267		284,369
Cash inflows				
Secured lending (e.g., reverse repos)	197,362	39,502	162,748	34,331
Inflows from fully performing exposures	14,953	10,532	13,290	9,453
Other cash inflows	67,597	67,597	64,298	64,298
Total cash inflows		117,631		108,082
		Total adjusted value		Total adjusted value
Total HQLA		214,242		214,923
Total net cash outflows		175,636		176,287
Liquidity coverage ratio		122%		122%

(1) The LCR is calculated in accordance with OSFI's LAR guideline, which, in turn, reflects liquidity-related requirements issued by the BCBS. The LCR for the quarter ended April 30, 2018 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%).

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 2018 vs. Q1 2018

The average LCR for the quarter ended April 30, 2018 was 122%. This translates into a surplus of approximately $39 billion. As at April 30, 2018, our LCR position was consistent with the position in 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 of our 2017 Annual Report.

	As at April 30, 2018									
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ 67,161	$ 2	$ –	$ –	$ –	$ –	$ –	$ –	$ 2,581	$ 69,744
Securities										
Trading (1)	89,279	3	12	20	32	51	61	6,485	35,225	131,168
Investment, net of applicable allowance	2,221	5,165	1,924	4,433	1,518	10,143	23,430	40,460	379	89,673
Assets purchased under reverse repurchase agreements and securities borrowed	142,023	58,448	21,394	12,163	15,688	2,572	–	–	8,896	261,184
Loans, net of applicable allowance	20,829	18,682	23,004	20,437	25,638	113,272	203,598	37,038	88,895	551,393
Other										
Customers' liability under acceptances	10,988	4,561	112	–	–	7	–	–	(15)	15,653
Derivatives	7,219	7,986	4,342	5,047	2,896	9,803	24,502	32,380	–	94,175
Other financial assets	24,714	814	673	100	205	119	220	1,664	2,018	30,527
Total financial assets	$ 364,434	$ 95,661	$ 51,461	$ 42,200	$ 45,977	$ 135,967	$ 251,811	$ 118,027	$ 137,979	$ 1,243,517
Other non-financial assets	2,242	1,143	230	644	245	1,092	1,421	1,220	23,024	31,261
Total assets	$ 366,676	$ 96,804	$ 51,691	$ 42,844	$ 46,222	$ 137,059	$ 253,232	$ 119,247	$ 161,003	$ 1,274,778
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	$ 49,103	$ 48,759	$ 40,315	$ 26,428	$ 30,622	$ 31,015	$ 48,393	$ 13,837	$ 435,008	$ 723,480
Secured borrowing	2,447	6,618	7,071	5,971	5,246	8,685	20,395	6,549	–	62,982
Covered bonds	–	1,349	4,898	–	2,604	9,213	16,271	1,251	–	35,586
Other										
Acceptances	10,971	4,571	118	–	–	6	–	–	2	15,668
Obligations related to securities sold short	33,047	–	–	–	–	–	–	–	–	33,047
Obligations related to assets sold under repurchase agreements and securities loaned	128,082	32,572	1,427	130	106	12	–	–	8,589	170,918
Derivatives	7,146	7,148	4,445	4,017	2,778	9,188	–	56,168	–	90,890
Other financial liabilities	25,495	617	541	209	326	142	425	4,456	654	32,865
Subordinated debentures	–	–	–	–	–	103	205	8,760	–	9,068
Total financial liabilities	$ 256,291	$ 101,634	$ 58,815	$ 36,755	$ 41,682	$ 58,364	$ 85,689	$ 91,021	$ 444,253	$ 1,174,504
Other non-financial liabilities	1,062	757	122	2,517	1,040	754	766	9,245	7,986	24,249
Equity	–	–	–	–	–	–	–	–	76,025	76,025
Total liabilities and equity	$ 257,353	$ 102,391	$ 58,937	$ 39,272	$ 42,722	$ 59,118	$ 86,455	$ 100,266	$ 528,264	$ 1,274,778
Off-balance sheet items										
Financial guarantees	$ 711	$ 1,443	$ 1,382	$ 2,543	$ 2,396	$ 901	$ 3,857	$ 73	$ 44	$ 13,350
Lease commitments	63	127	193	191	187	709	1,481	2,832	–	5,783
Commitments to extend credit	3,744	10,373	7,620	11,369	12,531	35,874	144,606	15,050	5,698	246,865
Other credit-related commitments	496	1,032	1,224	1,176	1,541	398	864	243	102,522	109,496
Other commitments	11	73	–	–	–	–	–	–	419	503
Total off-balance sheet items	$ 5,025	$ 13,048	$ 10,419	$ 15,279	$ 16,655	$ 37,882	$ 150,808	$ 18,198	$ 108,683	$ 375,997

(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, 2018									
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ 69,278	$ 6	$ –	$ –	$ –	$ –	$ –	$ –	$ 2,473	$ 71,757
Securities										
Trading (1)	83,910	18	3	12	35	65	60	6,495	38,763	129,361
Investment, net of applicable allowance	2,697	5,696	2,680	1,435	4,392	7,451	27,290	40,899	361	92,901
Assets purchased under reverse repurchase agreements and securities borrowed	138,312	63,865	20,718	11,396	11,398	6,308	–	–	7,768	259,765
Loans, net of applicable allowance	19,555	19,637	26,397	21,193	21,367	105,718	200,092	37,651	86,434	538,044
Other										
Customers' liability under acceptances	11,667	4,627	66	–	3	1	5	–	(6)	16,363
Derivatives	8,617	10,741	5,063	4,237	4,951	10,194	29,109	32,597	3	105,512
Other financial assets	26,849	840	622	50	171	169	211	1,676	1,957	32,545
Total financial assets	$ 360,885	$ 105,430	$ 55,549	$ 38,323	$ 42,317	$ 129,906	$ 256,767	$ 119,318	$ 137,753	$ 1,246,248
Other non-financial assets	1,899	1,099	121	196	550	1,028	1,403	1,226	22,505	30,027
Total assets	$ 362,784	$ 106,529	$ 55,670	$ 38,519	$ 42,867	$ 130,934	$ 258,170	$ 120,544	$ 160,258	$ 1,276,275
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	$ 48,279	$ 37,442	$ 39,501	$ 29,383	$ 28,654	$ 31,207	$ 49,492	$ 13,235	$ 425,375	$ 702,568
Secured borrowing	2,541	5,166	7,187	4,489	4,605	8,410	22,852	6,137	–	61,387
Covered bonds	39	1,102	1,315	4,768	–	7,031	20,586	1,224	–	36,065
Other										
Acceptances	11,667	4,627	66	–	3	1	5	–	10	16,379
Obligations related to securities sold short	30,404	–	–	–	–	–	–	–	–	30,404
Obligations related to assets sold under repurchase agreements and securities loaned	144,781	27,123	3,272	–	513	12	–	–	7,618	183,319
Derivatives	8,961	11,324	5,857	4,333	4,703	10,864	27,196	30,980	1	104,219
Other financial liabilities	29,149	987	454	202	281	149	370	3,285	648	35,525
Subordinated debentures	–	–	–	–	–	100	197	8,664	–	8,961
Total financial liabilities	$ 275,821	$ 87,771	$ 57,652	$ 43,175	$ 38,759	$ 57,774	$ 120,698	$ 63,525	$ 433,652	$ 1,178,827
Other non-financial liabilities (3)	1,101	685	201	955	2,291	928	744	9,505	7,714	24,124
Equity	–	–	–	–	–	–	–	–	73,324	73,324
Total liabilities and equity	$ 276,922	$ 88,456	$ 57,853	$ 44,130	$ 41,050	$ 58,702	$ 121,442	$ 73,030	$ 514,690	$ 1,276,275
Off-balance sheet items										
Financial guarantees	$ 150	$ 925	$ 1,457	$ 1,586	$ 1,669	$ 3,675	$ 4,161	$ 76	$ 59	$ 13,758
Lease commitments	62	123	184	184	188	710	1,469	2,853	–	5,773
Commitments to extend credit	1,530	7,283	11,738	8,489	9,211	29,783	139,365	14,047	4,616	226,062
Other credit-related commitments	356	520	1,286	1,310	1,201	1,128	712	233	107,608	114,354
Other commitments	291	–	73	–	–	–	–	–	414	778
Total off-balance sheet items	$ 2,389	$ 8,851	$ 14,738	$ 11,569	$ 12,269	$ 35,296	$ 145,707	$ 17,209	$ 112,697	$ 360,725

(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 2017 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 2018 Report to Shareholders.

OSFI expects Canadian banks to currently meet the Basel III "all-in" 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. In fiscal 2018, the CVA scalars are 80%, 83% and 86% for CET1, Tier 1 and Total capital, respectively, and will reach 100% for each tier of capital in fiscal 2019.

On November 21, 2017, we were designated as a Global Systemically Important Bank (G-SIB) by the Financial Stability Board (FSB). This designation requires us to maintain a higher loss absorbency requirement (common equity as a percentage of RWA) of 1%. OSFI mandates the higher of the Domestic Systematically Important Bank (D-SIB) or G-SIB requirement to be applied (both of which are currently equivalent at 1% of risk-weighted assets).

Effective February 1, 2018, OSFI prescribed revisions to the current Basel I regulatory capital floor requiring a transition to a new regulatory capital floor of 75% of RWA based on the Basel II Standardized Approaches. This new regulatory floor will be transitioned over three quarters reflecting a regulatory capital floor requirement of 70%, 72.5%, and 75% in Q2 2018, Q3 2018, and Q4 2018, respectively.

The following table provides a summary of OSFI's current regulatory target ratios under Basel III:

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, 2018	Meet or exceed OSFI regulatory target ratios
	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%	10.9%	√
Tier 1 capital	> 6.0%	2.5%	> 8.5%	1.0%	> 9.5%	12.3%	√
Total capital	> 8.0%	2.5%	> 10.5%	1.0%	> 11.5%	14.1%	√
Leverage ratio	> 3.0%	n.a.	> 3.0%	n.a.	> 3.0%	4.3%	√

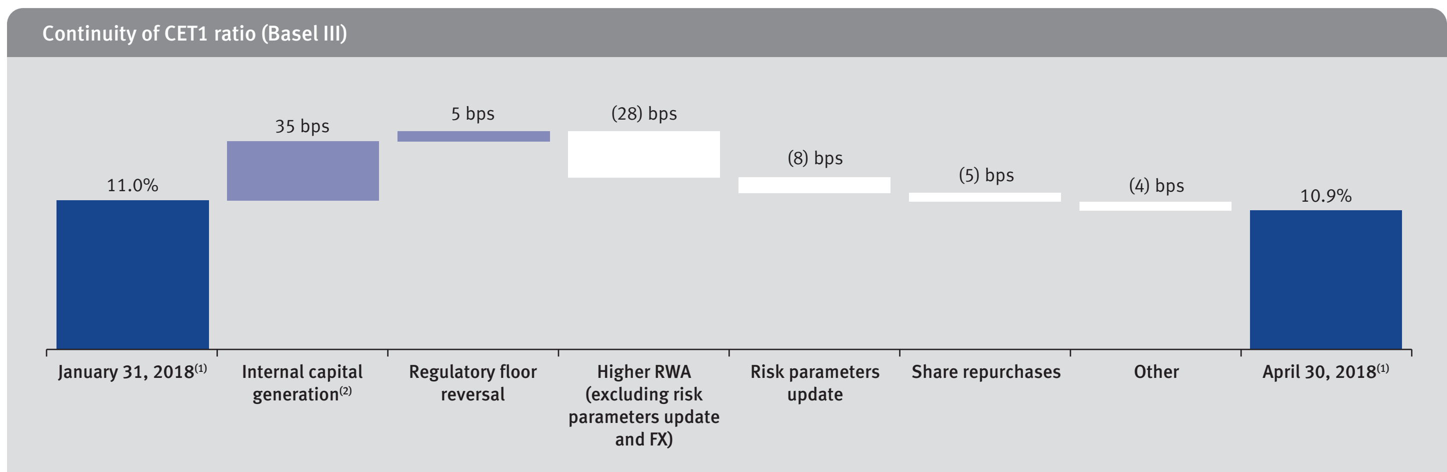
(1) The capital buffers include the capital conservation buffer and the countercyclical capital buffer as prescribed by OSFI.
(2) Effective January 1, 2018, a capital surcharge, equal to the higher of our D-SIB surcharge and the BCBS's G-SIB surcharge, is applicable to risk-weighted capital.
n.a. not applicable

The following tables provide 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		
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	April 30 2018	January 31 2018	October 31 2017
Capital (1)			
CET1 capital	**$ 53,277**	$ 51,145	$ 51,572
Tier 1 capital	**60,058**	57,925	58,361
Total capital	**69,214**	66,984	67,556
Risk-weighted Assets (RWA) used in calculation of capital ratios (1), (2)			
CET1 capital RWA	**$ 488,226**	$ 466,758	$ 474,478
Tier 1 capital RWA	**488,699**	466,758	474,478
Total capital RWA	**489,172**	466,758	474,478
Total capital RWA consisting of: (1)			
Credit risk	**$ 396,996**	$ 375,260	$ 376,519
Market risk	**31,750**	30,100	27,618
Operational risk	**60,426**	60,119	59,203
Regulatory floor adjustment (3)	**–**	1,279	11,138
Total capital RWA	**$ 489,172**	$ 466,758	$ 474,478
Capital ratios and Leverage ratio (1)			
CET1 ratio	**10.9%**	11.0%	10.9%
Tier 1 capital ratio	**12.3%**	12.4%	12.3%
Total capital ratio	**14.1%**	14.4%	14.2%
Leverage ratio	**4.3%**	4.2%	4.4%
Leverage ratio exposure (billions)	**$ 1,381.0**	$ 1,363.9	$ 1,315.5

(1) Capital, RWA, and capital ratios are calculated using OSFI's Capital Adequacy Requirements (CAR) based on the Basel III framework ("all-in" basis). The Leverage ratio is calculated using OSFI Leverage Requirements Guideline based on the Basel III framework.
(2) In fiscal 2018, the CVA scalars are 80%, 83% and 86%, respectively. In 2017, the scalars were 72%, 77% and 81%, respectively.
(3) Before any capital floor requirement as applicable, there are three different levels of RWAs for the calculation of the CET1, Tier 1, and Total capital ratios arising from the option we have chosen for the phase-in of the CVA capital charge. Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the advanced internal ratings-based (AIRB) approach for credit risk. The capital floor was determined by comparing a capital requirement under Basel I and Basel III, as specified by OSFI. If the capital requirement under the Basel III standards was less than 90% of the capital requirements as calculated under the Basel I standards, the difference was added to the RWAs. Effective February 1, 2018, OSFI prescribed the transition from the current Basel I regulatory capital floor to a new regulatory capital floor of 75% of RWA based on the Basel II Standardized Approaches. This new regulatory floor will be transitioned over three quarters reflecting a regulatory capital floor requirement of 70%, 72.5%, and 75% in Q2 2018, Q3 2018, and Q4 2018, respectively.

Q2 2018 vs. Q1 2018



(1) Represents rounded figures.
(2) Internal capital generation of $1.6 billion which represents Net income available to shareholders, less common and preferred shares dividends.

Our CET1 ratio was 10.9%, down 10 bps from last quarter, mainly reflecting higher RWA due to business growth, an update to our retail lending risk parameters, and share repurchases, partially offset by internal capital generation and the reversal of the Basel I regulatory floor adjustment.

CET1 capital RWA increased $21 billion, mainly due to business growth in wholesale loans and underwriting activities, the impact of foreign exchange translation, and an update to our retail lending risk parameters, partially offset by the reversal of the Basel I regulatory floor adjustment, as noted previously. Our risk parameters are validated and updated on a regular basis.

Our Tier 1 capital ratio of 12.3% was down 10 bps, reflecting the factors noted above under the CET1 ratio.

Our Total capital ratio of 14.1% was down 30 bps, reflecting the factors noted above under the CET1 ratio.

Our Leverage ratio of 4.3% was up 10 bps from last quarter, primarily due to internal capital generation and lower leverage exposures (excluding the impact of foreign exchange translation), mainly in securities and repo-style transactions, partially offset by share repurchases and the impact of foreign exchange translation.

Selected capital management activity

The following table provides our selected capital management activity:

	For the three months ended April 30, 2018		For the six months ended April 30, 2018	
(Millions of Canadian dollars, except number of shares)	Number of shares (000s)	Amount	Number of shares (000s)	Amount
Tier 1 capital				
Common shares activity				
Issued in connection with share-based compensation plans (1)	201	$ 15	665	$ 45
Purchased for cancellation	(2,257)	(28)	(11,554)	(141)
Redemption of preferred shares, Series C-1 (2)	–	–	(82)	(107)

(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. The NCIB commenced on February 27, 2018 and will continue until February 26, 2019 or such earlier date as we complete the repurchase of all shares permitted under the bid. Our previous NCIB for the purchase of up to 30 million of our common shares commenced on March 14, 2017 and was completed on January 31, 2018. 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 such repurchased shares will be the prevailing market price at the time of acquisition.

For the three months ended April 30, 2018, the total number of common shares repurchased and cancelled under our NCIB program was approximately 2.3 million. The total cost of the shares repurchased was $224 million, comprised of a book value of $28 million and an additional premium paid on repurchase of $196 million.

For the six months ended April 30, 2018, the total number of common shares repurchased and cancelled under our NCIB programs was approximately 11.6 million, including 9.3 million common shares repurchased pursuant to a specific share repurchase program. The total cost of the shares repurchased was $1,147 million, comprised of a book value of $141 million and an additional premium paid on repurchase of $1,006 million. Purchases made under the specific share repurchase program were from an arm's length third party seller and at a discount to the prevailing market price of our common shares at the time of purchases.

We have innovative capital instruments, RBC Trust Capital Securities, issued through our structured entity RBC Capital Trust (Trust). On May 16, 2018, we announced that the Trust will redeem all 500,000 units of its issued and outstanding Trust Capital Securities – Series 2008-1 on June 30, 2018, for cash at a redemption price of $1,000 per unit to be paid on July 3, 2018.

Selected share data

(Millions of Canadian dollars, except number of shares and as otherwise noted)	As at April 30, 2018		
	Number of shares (000s)	Amount	Dividends declared per share
Common shares outstanding (1)	1,442,009	$ 17,634	$ 0.94
First preferred shares outstanding			
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 AD	10,000	250	0.28
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 AJ (3)	13,579	339	0.22
Non-cumulative Series AK (3)	2,421	61	0.19
Non-cumulative Series AL (3)	12,000	300	0.27
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 C-2 (5)	20	31	US$ 16.88
Treasury shares held – preferred	(112)	(3)	
Treasury shares held – common	(1,023)	(95)	
Stock options			
Outstanding	9,348		
Exercisable	4,526		
Dividends			
Common		1,356	
Preferred		71	

(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.

As at May 18, 2018, the number of outstanding common shares and stock options and awards were 1,442,013,049 and 9,341,857, respectively, and the number of Treasury shares – preferred and Treasury shares – common were (9,896) and (886,950), respectively.

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, preferred shares Series BB, preferred shares Series BD, preferred shares Series BF, preferred shares Series BH, preferred shares Series BI, preferred shares Series BJ, preferred shares Series BK, preferred shares Series BM, subordinated debentures due on July 17, 2024, subordinated debentures due on September 29, 2026, subordinated debentures due on June 4, 2025, subordinated debentures due on January 20, 2026 and subordinated debentures due on 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 2,736 million RBC common shares, in aggregate, which would represent a dilution impact of 65.48% based on the number of RBC common shares outstanding as at April 30, 2018.

Attributed capital

Our methodology for allocating capital to our business segments is based on the higher of fully diversified economic capital and the Basel III regulatory capital requirements. Risk-based capital attribution provides a uniform base for performance measurement among business segments, which compares to our overall corporate return objective and facilitates management decisions in resource allocation in conjunction with other factors.

The following outlines our attributed capital:

	For the three months ended		
(Millions of Canadian dollars)	April 30 2018	January 31 2018	October 31 2017
Credit risk	$ 21,400	$ 21,650	$ 21,500
Market risk (trading and non-trading)	4,150	3,850	3,750
Operational risk	5,500	5,550	5,150
Business and fixed asset risk	3,400	3,350	3,250
Insurance risk	700	650	700
Goodwill and other intangibles	15,550	15,300	15,250
Regulatory capital allocation	11,550	11,450	10,450
Attributed capital	$ 62,250	$ 61,800	$ 60,050
Unattributed capital	5,200	5,050	5,850
Average common equity	$ 67,450	$ 66,850	$ 65,900

Q2 2018 vs. Q1 2018

Attributed capital increased $450 million reflecting higher goodwill and other intangibles, mainly due to the impact of foreign exchange translation, and growth in RWA.

We remain well capitalized with current levels of available capital exceeding the attributed capital required to underpin all of our material risks.

Capital, liquidity, and other regulatory developments

Canadian Bank Recapitalization (Bail-in) Regime

Bail-in regimes are being implemented in a number of jurisdictions in an effort to limit taxpayer exposure to losses of a failing institution and ensure the institution's shareholders and creditors remain responsible for bearing such losses. On June 22, 2016, legislation came into force, amending certain federal statutes pertaining to banks to create a bank recapitalization, or "bail-in" regime, for the six systemically important banks in Canada. On April 18, 2018, the Department of Finance published bail-in regulations under the Canada Deposit Insurance Corporation (CDIC) Act and the *Bank Act*. Under these regulations, 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. The regulations are effective September 23, 2018. These changes are not expected to have a material impact on our cost of long-term unsecured funding.

Total Loss Absorbing Capacity (TLAC)

On April 18, 2018, OSFI released its final guideline on TLAC, which apply 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 global systemically important banks (G-SIBs), but tailored to the Canadian context. The standards are 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. We are expected to comply with the disclosure requirements beginning the first quarter of 2019 and the remaining TLAC standard requirements by November 1, 2021. We do not anticipate any challenges in meeting these TLAC requirements.

Capital treatment for simple, transparent and comparable (STC) short-term securitizations

On May 14, 2018, the BCBS finalized their standard on the *Capital treatment for simple, transparent and comparable short-term securitizations*. This standard supplements the *Criteria for identifying simple, transparent and comparable short-term securitizations* standard issued jointly with the International Organization of Securities Commissions. The standard sets out additional guidance and requirements for the purpose of applying preferential regulatory capital treatment for banks acting as investors in or as sponsors of STC short-term securitizations, typically in asset-backed commercial paper structures. Provided that the expanded set of STC short-term criteria are met, STC short-term securitizations will receive the same modest reduction in capital requirements as other STC term securitizations.

Similar to the STC framework for term securitizations, implementation of the STC short-term framework is not mandatory. However, we expect OSFI to reflect both term and short-term STC criteria on its adoption of the revised Securitization Framework in the CAR guidelines anticipated to be released in Q1 2019.

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 2017 Annual Report and the Economic, market and regulatory review and outlook section of this Q2 2018 Report to Shareholders. For further details on our framework and activities to manage risks, refer to the risk and Capital management sections of our 2017 Annual Report and the Risk management and Capital management sections of this Q2 2018 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 2017 Annual Consolidated Financial Statements and our Q2 2018 Condensed Financial Statements.

Changes in accounting policies and disclosures

Changes in accounting policies

During the first quarter of 2018, we adopted IFRS 9 *Financial Instruments* (IFRS 9). As permitted by the transition provisions of IFRS 9, we elected not to restate comparative period results; accordingly, all comparative period information prior to November 1, 2017 is presented in accordance with our previous accounting policies, as described in our 2017 Annual Report. Adjustments to carrying amounts of financial assets and liabilities at November 1, 2017 were recognized in opening Retained earnings and Other components of equity in the first quarter of 2018. Refer to Note 2 of our Condensed Financial Statements for details of these changes.

Future changes in accounting policies and disclosures

Future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements and an update is provided below:

Conceptual Framework for Financial Reporting

In March 2018, the IASB issued its revised *Conceptual Framework for Financial Reporting* (*Conceptual Framework*). This replaces the previous version of the *Conceptual Framework* issued in 2010. The revised *Conceptual Framework* will be effective on November 1, 2020. We are currently assessing the impact of adopting this standard on our Consolidated Financial Statements.

Controls and procedures

Disclosure controls and procedures

As of April 30, 2018, 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, 2018.

Internal control over financial reporting

No changes were made in our internal control over financial reporting during the quarter ended April 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. On November 1, 2017, we adopted IFRS 9 and have updated and modified certain internal controls over financial reporting as a result of the new accounting standard.

Related party transactions

In the ordinary course of business, we provide normal banking services and operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 12 and 28 of our audited 2017 Annual Consolidated Financial Statements.

EDTF recommendations index

We aim to present transparent, high-quality risk disclosures by providing disclosures in our 2017 Annual Report, Q2 2018 Report to Shareholders (RTS) and Supplementary Financial Information package (SFI), in accordance with recommendations from the Financial Stability Board's (FSB) Enhanced Disclosure Task Force (EDTF).

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	50	116	1
	2	Define risk terminology and measures		52, 54-57 206-207	–
	3	Top and emerging risks		53	–
	4	New regulatory ratios	44-45	92-95	–
Risk governance, risk management and business model	5	Risk management organization		52, 54-57	–
	6	Risk culture		54-57	–
	7	Risk in the context of our business activities		100	–
	8	Stress testing		56-57, 69	–
Capital adequacy and risk-weighted assets (RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	45	92-95	–
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet		–	22-25
	11	Flow statement of the movements in regulatory capital		–	26
	12	Capital strategic planning		92-95	–
	13	RWA by business segments		–	29
	14	Analysis of capital requirement, and related measurement model information		58-60	27-28
	15	RWA credit risk and related risk measurements		–	44-46
	16	Movement of risk-weighted assets by risk type		–	29
	17	Basel back-testing		55, 58	44
Liquidity	18	Quantitative and qualitative analysis of our liquidity reserve	37-38	75-77, 81-82	–
Funding	19	Encumbered and unencumbered assets by balance sheet category, and contractual obligations for rating downgrades	39, 41	77, 80	–
	20	Maturity analysis of consolidated total assets, liabilities and off-balance sheet commitments analyzed by remaining contractual maturity at the balance sheet date	43-44	82-83	–
	21	Sources of funding and funding strategy	39-40	77-79	–
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	36-37	73-74	–
	23	Decomposition of market risk factors	32-35	68-72	–
	24	Market risk validation and back-testing		69	–
	25	Primary risk management techniques beyond reported risk measures and parameters		68-72	–
Credit risk	26	Bank's credit risk profile	24-32	58-68,	32-46
		Quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet	76-82	154-156 111-115	42
	27	Policies for identifying impaired loans		59-60, 101-102, 130	–
	28	Reconciliation of the opening and closing balances of impaired loans and impairment allowances during the year		–	34, 39
	29	Quantification of gross notional exposure for OTC derivatives or exchange-traded derivatives		61-62	48
	30	Credit risk mitigation, including collateral held for all sources of credit risk		60	43
Other	31	Other risk types		84-91	–
	32	Publicly known risk events		87-89, 193-194	–

Interim Condensed Consolidated Financial Statements (unaudited)

Interim Condensed Consolidated Balance Sheets (unaudited)

(Millions of Canadian dollars)	As at April 30 2018	October 31 2017
Assets		
Cash and due from banks	$ 32,765	$ 28,407
Interest-bearing deposits with banks	36,979	32,662
Securities (Note 2)		
Trading	131,168	127,657
Investment, net of applicable allowance (Notes 2 and 4)	89,673	90,722
	220,841	218,379
Assets purchased under reverse repurchase agreements and securities borrowed	261,184	220,977
Loans (Notes 2 and 5)		
Retail	388,558	385,170
Wholesale	165,643	159,606
	554,201	544,776
Allowance for loan losses (Notes 2 and 5)	(2,808)	(2,159)
	551,393	542,617
Segregated fund net assets	1,308	1,216
Other		
Customers' liability under acceptances	15,653	16,459
Derivatives	94,175	95,023
Premises and equipment	2,706	2,670
Goodwill	10,990	10,977
Other intangibles	4,533	4,507
Other assets	42,251	38,959
	170,308	168,595
Total assets	$ 1,274,778	$ 1,212,853
Liabilities and equity		
Deposits (Note 6)		
Personal	$ 263,390	$ 260,213
Business and government	530,365	505,665
Bank	28,293	23,757
	822,048	789,635
Segregated fund net liabilities	1,308	1,216
Other		
Acceptances	15,668	16,459
Obligations related to securities sold short	33,047	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	170,918	143,084
Derivatives	90,890	92,127
Insurance claims and policy benefit liabilities	9,763	9,676
Other liabilities (Note 2)	46,043	46,955
	366,329	338,309
Subordinated debentures	9,068	9,265
Total liabilities	1,198,753	1,138,425
Equity attributable to shareholders		
Preferred shares (Note 9)	6,303	6,413
Common shares (shares issued – 1,440,986,352 and 1,452,534,303) (Note 9)	17,539	17,703
Retained earnings	47,405	45,359
Other components of equity	4,178	4,354
	75,425	73,829
Non-controlling interests	600	599
Total equity	76,025	74,428
Total liabilities and equity	$ 1,274,778	$ 1,212,853

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

Interim Condensed Consolidated Statements of Income (unaudited)

	For the three months ended		For the six months ended	
(Millions of Canadian dollars, except per share amounts)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Interest income (Note 3)				
Loans	$ 5,059	$ 4,497	$ 10,032	$ 9,078
Securities	1,396	1,230	2,750	2,451
Assets purchased under reverse repurchase agreements and securities borrowed	1,285	698	2,393	1,301
Deposits and other	125	66	230	120
	7,865	6,491	15,405	12,950
Interest expense (Note 3)				
Deposits and other	2,220	1,513	4,207	3,017
Other liabilities	1,148	715	2,182	1,280
Subordinated debentures	76	65	150	131
	3,444	2,293	6,539	4,428
Net interest income	4,421	4,198	8,866	8,522
Non-interest income				
Insurance premiums, investment and fee income	806	1,448	1,950	1,945
Trading revenue	236	181	554	444
Investment management and custodial fees	1,318	1,189	2,643	2,348
Mutual fund revenue	862	820	1,747	1,634
Securities brokerage commissions	334	360	689	759
Service charges	443	437	883	875
Underwriting and other advisory fees	457	590	998	1,058
Foreign exchange revenue, other than trading	277	236	558	463
Card service revenue	267	241	524	477
Credit fees	317	358	645	714
Net gains on investment securities (Notes 2 and 4)	49	54	88	81
Share of profit in joint ventures and associates	14	41	39	292
Other	253	259	698	446
	5,633	6,214	12,016	11,536
Total revenue	10,054	10,412	20,882	20,058
Provision for credit losses (Notes 2, 4 and 5)	274	302	608	596
Insurance policyholder benefits, claims and acquisition expense	421	1,090	1,257	1,273
Non-interest expense				
Human resources (Note 7)	3,324	3,289	6,826	6,598
Equipment	386	344	758	700
Occupancy	386	404	765	803
Communications	249	241	473	462
Professional fees	321	265	602	520
Amortization of other intangibles	266	251	527	503
Other	550	537	1,142	1,060
	5,482	5,331	11,093	10,646
Income before income taxes	3,877	3,689	7,924	7,543
Income taxes	817	880	1,852	1,707
Net income	$ 3,060	$ 2,809	$ 6,072	$ 5,836
Net income attributable to:				
Shareholders	$ 3,051	$ 2,801	$ 6,052	$ 5,816
Non-controlling interests	9	8	20	20
	$ 3,060	$ 2,809	$ 6,072	$ 5,836
Basic earnings per share (in dollars) (Note 10)	$ 2.06	$ 1.86	$ 4.08	$ 3.84
Diluted earnings per share (in dollars) (Note 10)	2.06	1.85	4.07	3.82
Dividends per common share (in dollars)	0.94	0.87	1.85	1.70

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 April 30 2018	For the three months ended April 30 2017	For the six months ended April 30 2018	For the six months ended April 30 2017
Net income	$ 3,060	$ 2,809	$ 6,072	$ 5,836
Other comprehensive income (loss), net of taxes				
Items that will be reclassified subsequently to income:				
Net change in unrealized gains (losses) on available-for-sale securities				
Net unrealized gains (losses) on available-for-sale securities		128		(1)
Reclassification of net losses (gains) on available-for-sale securities to income		(37)		(49)
Net change in unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income				
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	(14)		(38)	
Provision for credit losses recognized in income	9		24	
Reclassification of net losses (gains) on debt securities and loans at fair value through other comprehensive income to income	(35)		(63)	
	(40)	91	(77)	(50)
Foreign currency translation adjustments				
Unrealized foreign currency translation gains (losses)	1,978	2,595	(28)	1,133
Net foreign currency translation gains (losses) from hedging activities	(710)	(1,005)	(52)	(462)
Reclassification of losses (gains) on foreign currency translation to income	–	–	–	(10)
	1,268	1,590	(80)	661
Net change in cash flow hedges				
Net gains (losses) on derivatives designated as cash flow hedges	(217)	(86)	207	10
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	144	31	(9)	68
	(73)	(55)	198	78
Items that will not be reclassified subsequently to income:				
Remeasurements of employee benefit plans (Note 7)	84	(275)	133	322
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	144	(212)	126	(245)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	1		(1)	
	229	(487)	258	77
Total other comprehensive income (loss), net of taxes	1,384	1,139	299	766
Total comprehensive income (loss)	$ 4,444	$ 3,948	$ 6,371	$ 6,602
Total comprehensive income attributable to:				
Shareholders	$ 4,432	$ 3,935	$ 6,351	$ 6,580
Non-controlling interests	12	13	20	22
	$ 4,444	$ 3,948	$ 6,371	$ 6,602

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 April 30 2018	For the three months ended April 30 2017	For the six months ended April 30 2018	For the six months ended April 30 2017
Income taxes on other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities		$ 57		$ (11)
Reclassification of net losses (gains) on available-for-sale securities to income		(16)		(20)
Net unrealized gains (losses) on debt securities and loans at fair value through other comprehensive income	$ (40)		$ 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)		(30)	
Unrealized foreign currency translation gains (losses)	5	4	–	2
Net foreign currency translation gains (losses) from hedging activities	(239)	(342)	(20)	(159)
Net gains (losses) on derivatives designated as cash flow hedges	(78)	(32)	105	4
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	52	11	(34)	24
Remeasurements of employee benefit plans	30	(100)	50	106
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	53	(81)	46	(94)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(3)		(4)	
Total income tax expenses (recoveries)	$ (235)	$ (499)	$ 111	$ (148)

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

Interim Condensed Consolidated Statements of Changes in Equity (unaudited)

(Millions of Canadian dollars)	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Other components of equity: Available-for-sale securities	Other components of equity: FVOCI securities and loans	Other components of equity: Foreign currency translation	Other components of equity: Cash flow hedges	Other components of equity: Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
Balance at January 31, 2017	$ 6,713	$ 17,898	$ –	$ (33)	$ 42,996	$ 199		$ 3,759	$ 34	$ 3,992	$ 71,566	$ 585	$ 72,151
Changes in equity													
Issues of share capital	–	50	–	–	(1)	–		–	–	–	49	–	49
Common shares purchased for cancellation	–	(231)	–	–	(1,406)	–		–	–	–	(1,637)	–	(1,637)
Redemption of preferred shares	–	–	–	–	–	–		–	–	–	–	–	–
Sales of treasury shares	–	–	23	1,124	–	–		–	–	–	1,147	–	1,147
Purchases of treasury shares	–	–	(24)	(1,101)	–	–		–	–	–	(1,125)	–	(1,125)
Share-based compensation awards	–	–	–	–	(13)	–		–	–	–	(13)	–	(13)
Dividends on common shares	–	–	–	–	(1,271)	–		–	–	–	(1,271)	–	(1,271)
Dividends on preferred shares and other	–	–	–	–	(77)	–		–	–	–	(77)	–	(77)
Other	–	–	–	–	(4)	–		–	–	–	(4)	–	(4)
Net income	–	–	–	–	2,801	–		–	–	–	2,801	8	2,809
Total other comprehensive income (loss), net of taxes	–	–	–	–	(487)	91		1,585	(55)	1,621	1,134	5	1,139
Balance at April 30, 2017	$ 6,713	$ 17,717	$ (1)	$ (10)	$ 42,538	$ 290		$ 5,344	$ (21)	$ 5,613	$ 72,570	$ 598	$ 73,168
Balance at January 31, 2018	$ 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
Balance at April 30, 2018	$ 6,306	$ 17,634	$ (3)	$ (95)	$ 47,405		$ 84	$ 3,465	$ 629	$ 4,178	$ 75,425	$ 600	$ 76,025

(Millions of Canadian dollars)	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Other components of equity: 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
Balance at October 31, 2016	$ 6,713	$ 17,939	$ –	$ (80)	$ 41,519	$ 340		$ 4,685	$ (99)	$ 4,926	$ 71,017	$ 595	$ 71,612
Changes in equity													
Issues of share capital	–	146	–	–	(1)	–		–	–	–	145	–	145
Common shares purchased for cancellation	–	(368)	–	–	(2,220)	–		–	–	–	(2,588)	–	(2,588)
Redemption of preferred shares	–	–	–	–	–	–		–	–	–	–	–	–
Sales of treasury shares	–	–	44	2,315	–	–		–	–	–	2,359	–	2,359
Purchases of treasury shares	–	–	(45)	(2,245)	–	–		–	–	–	(2,290)	–	(2,290)
Share-based compensation awards	–	–	–	–	(25)	–		–	–	–	(25)	–	(25)
Dividends on common shares	–	–	–	–	(2,503)	–		–	–	–	(2,503)	–	(2,503)
Dividends on preferred shares and other	–	–	–	–	(152)	–		–	–	–	(152)	(17)	(169)
Other	–	–	–	–	27	–		–	–	–	27	(2)	25
Net income	–	–	–	–	5,816	–		–	–	–	5,816	20	5,836
Total other comprehensive income (loss), net of taxes	–	–	–	–	77	(50)		659	78	687	764	2	766
Balance at April 30, 2017	$ 6,713	$ 17,717	$ (1)	$ (10)	$ 42,538	$ 290		$ 5,344	$ (21)	$ 5,613	$ 72,570	$ 598	$ 73,168
Balance at October 31, 2017	$ 6,413	$ 17,730	$ –	$ (27)	$ 45,359	$ 378		$ 3,545	$ 431	$ 4,354	$ 73,829	$ 599	$ 74,428
Transition adjustment (Note 2)	–	–	–	–	(558)	(378)	$ 299	–	–	(79)	(637)	–	(637)
Balance at November 1, 2017	$ 6,413	$ 17,730	$ –	$ (27)	$ 44,801	$ –	$ 299	$ 3,545	$ 431	$ 4,275	$ 73,192	$ 599	$ 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)	(19)	(162)
Other	–	–	–	–	120		(138)	–	–	(138)	(18)	–	(18)
Net income	–	–	–	–	6,052		–	–	–	–	6,052	20	6,072
Total other comprehensive income (loss), net of taxes	–	–	–	–	258		(77)	(80)	198	41	299	–	299
Balance at April 30, 2018	$ 6,306	$ 17,634	$ (3)	$ (95)	$ 47,405		$ 84	$ 3,465	$ 629	$ 4,178	$ 75,425	$ 600	$ 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 April 30 2018	For the three months ended April 30 2017	For the six months ended April 30 2018	For the six months ended April 30 2017
Cash flows from operating activities				
Net income	$ 3,060	$ 2,809	$ 6,072	$ 5,836
Adjustments for non-cash items and others				
Provision for credit losses	274	302	608	596
Depreciation	141	146	276	308
Deferred income taxes	42	(274)	313	30
Amortization and impairment of other intangibles	266	251	527	503
Net changes in investments in joint ventures and associates	(13)	(40)	(35)	(290)
Losses (Gains) on investment securities (Note 2)	(51)	(77)	(94)	(123)
Losses (Gains) on disposition of business	–	2	–	2
Impairment of available-for-sale securities		14		31
Adjustments for net changes in operating assets and liabilities				
Insurance claims and policy benefit liabilities	(214)	477	(19)	98
Net change in accrued interest receivable and payable	76	(5)	(56)	(191)
Current income taxes	(541)	(419)	(2,511)	(1,534)
Derivative assets	11,337	(3,344)	848	18,181
Derivative liabilities	(13,329)	3,385	(1,237)	(17,519)
Trading securities	(1,807)	9,821	(613)	18,894
Loans, net of securitizations	(14,695)	(10,271)	(18,274)	(10,686)
Assets purchased under reverse repurchase agreements and securities borrowed	(1,419)	(19,646)	(40,208)	(30,629)
Deposits, net of securitizations	23,337	28,071	33,751	27,994
Obligations related to assets sold under repurchase agreements and securities loaned	(12,401)	4,481	27,834	24,514
Obligations related to securities sold short	2,643	(638)	3,039	(13,038)
Brokers and dealers receivable and payable	(778)	177	(944)	182
Other	(2,469)	(1,564)	(1,244)	(2,125)
Net cash from (used in) operating activities	(6,541)	13,658	8,033	21,034
Cash flows from investing activities				
Change in interest-bearing deposits with banks	290	(3,495)	(4,317)	1,976
Proceeds from sale of investment securities (Note 2)	5,280	3,038	10,497	5,272
Proceeds from maturity of investment securities (Note 2)	11,753	9,684	18,885	21,002
Purchases of investment securities (Note 2)	(11,310)	(13,709)	(24,652)	(28,035)
Net acquisitions of premises and equipment and other intangibles	(517)	(414)	(874)	(671)
Net cash from (used in) investing activities	5,496	(4,896)	(461)	(456)
Cash flows from financing activities				
Issue of common shares	9	38	32	134
Common shares purchased for cancellation	(224)	(2,486)	(1,147)	(2,588)
Redemption of preferred shares	–	–	(105)	–
Sales of treasury shares	1,408	1,147	2,902	2,359
Purchases of treasury shares	(1,499)	(1,125)	(2,973)	(2,290)
Dividends paid	(1,391)	(1,307)	(2,787)	(2,616)
Issuance costs	–	(1)	–	(1)
Dividends/distributions paid to non-controlling interests	(1)	–	(19)	(17)
Change in short-term borrowings of subsidiaries	899	(12)	898	(17)
Net cash from (used in) financing activities	(799)	(3,746)	(3,199)	(5,036)
Effect of exchange rate changes on cash and due from banks	121	139	(15)	47
Net change in cash and due from banks	(1,723)	5,155	4,358	15,589
Cash and due from banks at beginning of period (1)	34,488	25,363	28,407	14,929
Cash and due from banks at end of period (1)	$ 32,765	$ 30,518	$ 32,765	$ 30,518
Cash flows from operating activities include:				
Amount of interest paid	$ 3,005	$ 1,920	$ 6,006	$ 3,994
Amount of interest received	7,434	6,099	14,689	12,142
Amount of dividend received	429	355	839	947
Amount of income taxes paid	1,050	1,045	4,168	3,047

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were $2.6 billion as at April 30, 2018 (January 31, 2018 – $2.5 billion; October 31, 2017 – $2.3 billion; April 30, 2017 – $1.8 billion; January 31, 2017 – $1.7 billion; October 31, 2016 – $3.3 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 2017 Annual Consolidated Financial Statements and the accompanying notes included on pages 117 to 204 in our 2017 Annual Report. Tabular information is stated in millions of Canadian dollars, except per share amounts and percentages. On May 23, 2018, 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 2017 Annual Consolidated Financial Statements. Significant accounting policies are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements. Future changes in accounting policies and disclosures that are not yet effective for us are described in Note 2 of our audited 2017 Annual Consolidated Financial Statements and an update is provided in the Accounting and control matters section of our Management's Discussion and Analysis.

Changes in accounting policies

During the first quarter, we adopted IFRS 9 *Financial Instruments* (IFRS 9). As a result of the application of IFRS 9, we changed our accounting policies in the areas outlined below, and these new policies were applicable from November 1, 2017. As permitted by the transition provisions of IFRS 9, 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 2017 Annual Report. Adjustments to carrying amounts of financial assets and liabilities at the date of initial application (November 1, 2017) were recognized in opening Retained earnings and Other components of equity in the first quarter of 2018. New or amended interim disclosures have been provided for the current period, where applicable, and comparative period disclosures are consistent with those made in the prior year.

Classification of financial assets

Financial assets are measured at initial recognition at fair value, and are classified as and subsequently measured at fair value through profit or loss (FVTPL), fair value through other comprehensive income (FVOCI) or amortized cost based on our business model for managing the financial instruments and the contractual cash flow characteristics of the instrument.

Debt instruments are measured at amortized cost if both of the following conditions are met and the asset is not designated as FVTPL: (a) the asset is held within a business model that is Held-to-Collect (HTC) as described below, and (b) the contractual terms of the instrument give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding (SPPI).

Debt instruments are measured at FVOCI if both of the following conditions are met and the asset is not designated as FVTPL: (a) the asset is held within a business model that is Held-to-Collect-and-Sell (HTC&S) as described below, and (b) the contractual terms of the instrument give rise, on specified dates, to cash flows that are SPPI.

All other debt instruments are measured at FVTPL.

Equity instruments are measured at FVTPL, unless the asset is not held for trading purposes and we make an irrevocable election to designate the asset as FVOCI. This election is made on an instrument-by-instrument basis.

Business model assessment

We determine our business models at the level that best reflects how we manage portfolios of financial assets to achieve our business objectives. Judgment is used in determining our business models, which is supported by relevant, objective evidence including:

- How the economic activities of our businesses generate benefits, for example through trading revenue, enhancing yields or hedging funding or other costs and how such economic activities are evaluated and reported to key management personnel;
- The significant risks affecting the performance of our businesses, for example, market risk, credit risk, or other risks, and the activities undertaken to manage those risks, as described in the shaded text and tables marked with an asterisk (*) on pages 57 to 84 of our 2017 Annual Report;
- Historical and future expectations of sales of the loans or securities portfolios managed as part of a business model; and
- The compensation structures for managers of our businesses, to the extent that these are directly linked to the economic performance of the business model.

Our business models fall into three categories, which are indicative of the key strategies used to generate returns:

- HTC: The objective of this business model is to hold loans and securities to collect contractual principal and interest cash flows. Sales are incidental to this objective and are expected to be insignificant or infrequent.
- HTC&S: Both collecting contractual cash flows and sales are integral to achieving the objective of the business model.
- Other fair value business models: These business models are neither HTC nor HTC&S, and primarily represent business models where assets are held-for-trading or managed on a fair value basis.

SPPI assessment

Instruments held within a HTC or HTC&S business model are assessed to evaluate if their contractual cash flows are comprised of solely payments of principal and interest. SPPI payments are those which would typically be expected from basic lending arrangements. Principal amounts include par repayments from lending and financing arrangements, and interest primarily relates to basic lending returns, including compensation for credit risk and the time value of money associated with the principal amount outstanding over a period of time. Interest can also include other basic lending risks and costs (for example, liquidity risk, servicing or administrative costs) associated with holding the financial asset for a period of time, and a profit margin.

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

Where the contractual terms introduce exposure to risk or variability of cash flows that are inconsistent with a basic lending arrangement, the related financial asset is classified as and measured at FVTPL.

Securities

Trading securities include all securities that are classified as FVTPL by nature and securities designated as FVTPL. Obligations to deliver trading securities sold but not yet purchased are recorded as liabilities and carried at fair value. Realized and unrealized gains and losses on these securities are generally recorded as Trading revenue in Non-interest income. Dividends and interest income accruing on Trading securities are recorded in Interest income. Interest and dividends accrued on interest-bearing and equity securities sold short are recorded in Interest expense.

Investment securities include all securities classified as FVOCI or amortized cost. All investment securities are initially recorded at fair value and subsequently measured according to the respective classification. Prior to our adoption of IFRS 9, Investment securities were comprised of available-for-sale securities and held-to-maturity securities.

Investment securities carried at amortized cost are measured using the effective interest method, and are presented net of any allowance for credit losses, calculated in accordance with our policy for Allowance for credit losses, as described below. Interest income, including the amortization of premiums and discounts on securities measured at amortized cost are recorded in Net interest income. Impairment gains or losses recognized on amortized cost securities are recorded in Provision for credit losses. When a debt instrument measured at amortized cost is sold, the difference between the sale proceeds and the amortized cost of the security at the time of the sale is recorded as a Net gain (loss) on Investment securities in Non-interest income.

Debt securities carried at FVOCI are measured at fair value with unrealized gains and losses arising from changes in fair value included in Other components of equity. Impairment gains and losses are included in Provision for credit losses and correspondingly reduce the accumulated changes in fair value included in Other components of equity. When a debt instrument measured at FVOCI is sold, the cumulative gain or loss is reclassified from Other components of equity to Net gain (loss) on Investment securities in Non-interest income.

Equity securities carried at FVOCI are measured at fair value. Unrealized gains and losses arising from changes in fair value are recorded in Other components of equity and not subsequently reclassified to profit or loss when realized. Dividends from FVOCI equity securities are recognized in Interest income.

We account for all of our securities using settlement date accounting and changes in fair value between the trade date and settlement date are reflected in income for securities measured at FVTPL, and changes in the fair value of securities measured at FVOCI between the trade and settlement dates are recorded in OCI except for changes in foreign exchange rates on debt securities, which are recorded in Non-interest income.

Fair value option

A financial instrument with a reliably measurable fair value can be designated as FVTPL (the fair value option) on its initial recognition even if the financial instrument was not acquired or incurred principally for the purpose of selling or repurchasing. The fair value option can be used for financial assets if it eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities, or recognizing related gains and losses on a different basis (an "accounting mismatch"). The fair value option can be elected for financial liabilities if: (i) the election eliminates an accounting mismatch; (ii) the financial liability is part of a portfolio that is managed on a fair value basis, in accordance with a documented risk management or investment strategy; or (iii) there is an embedded derivative in the financial or non-financial host contract and the derivative is not closely related to the host contract. These instruments cannot be reclassified out of the FVTPL category while they are held or issued.

Financial assets designated as FVTPL are recorded at fair value and any unrealized gains or losses arising due to changes in fair value are included in Trading revenue or Non-interest income – Other, depending on our business purpose for holding the financial asset.

Financial liabilities designated as FVTPL are recorded at fair value and fair value changes attributable to changes in our own credit risk are recorded in OCI. Own credit risk amounts recognized in OCI are not reclassified subsequently to net income. The remaining fair value changes not attributable to changes in our own credit risk are recorded in Trading revenue or Non-interest income – Other, depending on our business purpose for issuing the financial liability. Upon initial recognition, if we determine that presenting the effects of our own credit risk changes in OCI would create or enlarge an accounting mismatch in net income, the full fair value change in our debt designated as at FVTPL is recognized in net income. To make that determination, we assess whether we expect that the effects of changes in the liability's credit risk will be offset in profit or loss by a change in the fair value of another financial instrument measured at FVTPL. Such an expectation is based on an economic relationship between the characteristics of the liability and the characteristics of the other financial instrument. The determination is made at initial recognition and is not reassessed. To determine the fair value adjustments on our debt instruments designated as at FVTPL, we calculate the present value of the instruments based on the contractual cash flows over the term of the arrangement by using our effective funding rate at the beginning and end of the period.

Derivatives

Derivatives are primarily used in trading activities. Derivatives are also used to manage our exposure to interest, currency, credit and other market risks. The most frequently used derivative products are interest rate and foreign exchange swaps, options, futures, and forward rate agreements, equity swaps and credit derivatives. All derivative instruments are recorded on our Consolidated Balance Sheets at fair value.

When derivatives are embedded in other financial instruments or host contracts, such combinations are known as hybrid instruments. Some of the cash flows of a hybrid instrument vary in a way similar to a stand-alone derivative. If the host contract is a financial asset within the scope of IFRS 9, the classification and measurement criteria are applied to the entire hybrid instrument as described in the Securities section of Note 2. If the host contract is a financial liability or an asset that is not within the scope of IFRS 9, embedded derivatives are separately recognized if the economic characteristics and risks of the embedded derivative are not

clearly and closely related to the host contract, unless an election has been made to elect the fair value option, as described above. The host contract is accounted for in accordance with the relevant standards. When derivatives are used in trading activities, the realized and unrealized gains and losses on these derivatives are recognized in Trading revenue in Non-interest income. Derivatives with positive fair values are presented as Derivative assets and derivatives with negative fair values are reported as Derivative liabilities. In accordance with our policy for offsetting financial assets and financial liabilities, the net fair value of certain derivative assets and liabilities are reported as an asset or liability, as appropriate. Valuation adjustments are included in the fair value of Derivative assets and Derivative liabilities. Premiums paid and premiums received are part of Derivative assets and Derivative liabilities, respectively.

When derivatives are used to manage our own exposures, we determine for each derivative whether hedge accounting can be applied, as discussed in the Hedge accounting section of Note 2 of our 2017 Annual Report.

Hedge accounting

We elected to continue to apply the hedge accounting principles under IAS 39 instead of those under IFRS 9. Our policy for hedge accounting is described in Note 2 of our 2017 Annual Report.

Loans

Loans are debt instruments recognized initially at fair value and are subsequently measured in accordance with the Classification of financial assets policy provided above. The majority of our loans are carried at amortized cost using the effective interest method, which represents the gross carrying amount less allowance for credit losses.

Interest on loans is recognized in Interest income – Loans using the effective interest method. The estimated future cash flows used in this calculation include those determined by the contractual term of the asset and all fees that are considered to be integral to the effective interest rate. Also included in this amount are transaction costs and all other premiums or discounts. Fees that relate to activities such as originating, restructuring or renegotiating loans are deferred and recognized as Interest income over the expected term of such loans using the effective interest method. Where there is a reasonable expectation that a loan will be originated, commitment and standby fees are also recognized as interest income over the expected term of the resulting loans using the effective interest method. Otherwise, such fees are recorded as other liabilities and amortized into Non-interest income over the commitment or standby period. Prepayment fees on mortgage loans are not included as part of the effective interest rate at origination. If prepayment fees are received on a renewal of a mortgage loan, the fee is included as part of the effective interest rate, and if not renewed, the prepayment fee is recognized in interest income at the prepayment date.

For loans carried at amortized cost or FVOCI, impairment losses are recognized at each balance sheet date in accordance with the three-stage impairment model outlined below.

Allowance for credit losses

An allowance for credit losses (ACL) is established for all financial assets, except for financial assets classified or designated as FVTPL and equity securities designated as FVOCI, which are not subject to impairment assessment. Assets subject to impairment assessment include certain loans, debt securities, interest-bearing deposits with banks, customers' liability under acceptances, accounts and accrued interest receivable, and finance and operating lease receivables. ACL on loans is presented in Allowance for loan losses. ACL on debt securities measured at FVOCI is presented in Other components of equity. Other financial assets carried at amortized cost are presented net of ACL on our Consolidated Balance Sheets.

Off-balance sheet items subject to impairment assessment include financial guarantees and undrawn loan commitments. For certain retail products, expected credit losses are measured based on the total exposure and are not attributable to the on- and off-balance sheet components. For these products, ACL is presented in Allowance for loan losses to the extent that ACL does not exceed the related loan balance, and thereafter presented in Other Liabilities – Provisions. For all other off-balance sheet products subject to impairment assessment, ACL is separately calculated and included in Other Liabilities – Provisions.

We measure the ACL on each balance sheet date according to a three-stage expected credit loss impairment model:

- Performing financial assets
  - Stage 1 – From initial recognition of a financial asset to the date on which the asset has experienced a significant increase in credit risk relative to its initial recognition, a loss allowance is recognized equal to the credit losses expected to result from defaults occurring over the 12 months following the reporting date.
  - Stage 2 – Following a significant increase in credit risk relative to the initial recognition of the financial asset, a loss allowance is recognized equal to the credit losses expected over the remaining lifetime of the asset.
- Impaired financial assets
  - Stage 3 – When a financial asset is considered to be credit-impaired, a loss allowance is recognized equal to credit losses expected over the remaining lifetime of the asset. Interest revenue is calculated based on the carrying amount of the asset, net of the loss allowance, rather than on its gross carrying amount.

The ACL is a discounted probability-weighted estimate of the cash shortfalls expected to result from defaults over the relevant time horizon. For loan commitments, credit loss estimates consider the portion of the commitment that is expected to be drawn over the relevant time period. For financial guarantees, credit loss estimates are based on the expected payments required under the guarantee contract. For finance lease receivables, credit loss estimates are based on cash flows consistent with the cash flows used in measuring the lease receivable.

Increases or decreases in the required ACL attributable to purchases and new originations, derecognitions or maturities, and remeasurements due to changes in loss expectations or stage migrations are recorded in Provision for credit losses. Write-offs and recoveries of amounts previously written off are recorded against ACL.

The ACL represents an unbiased estimate of expected credit losses on our financial assets as at the balance sheet date. Judgment is required in making assumptions and estimations when calculating the ACL, including movements between the three stages and the application of forward-looking information. The underlying assumptions and estimates may result in changes to the provisions from period to period that significantly affect our results of operations.

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

Measurement of expected credit losses

Expected credit losses are based on a range of possible outcomes and consider all available reasonable and supportable information including internal and external ratings, historical credit loss experience, and expectations about future cash flows. The measurement of expected credit losses is based primarily on the product of the instrument's probability of default (PD), loss given default (LGD), and exposure at default (EAD) discounted to the reporting date. The main difference between Stage 1 and Stage 2 expected credit losses for performing financial assets is the respective calculation horizon. Stage 1 estimates project PD, LGD and EAD over a maximum period of 12 months while Stage 2 estimates project PD, LGD and EAD over the remaining lifetime of the instrument.

An expected credit loss estimate is produced for each individual exposure. Relevant parameters are modelled on a collective basis using portfolio segmentation that allows for appropriate incorporation of forward-looking information. To reflect other characteristics that are not already considered through modelling, expert credit judgment is exercised in determining the final expected credit losses.

For a small percentage of our portfolios which lack detailed historical information and/or loss experience, we apply simplified measurement approaches that may differ from what is described above. These approaches have been designed to maximize the available information that is reliable and supportable for each portfolio and may be collective in nature.

Expected credit losses are discounted to the reporting period date using the effective interest rate.

Expected life

For instruments in Stage 2 or Stage 3, loss allowances reflect expected credit losses over the expected remaining lifetime of the instrument. For most instruments, the expected life is limited to the remaining contractual life.

An exemption is provided for certain instruments with the following characteristics: (a) the instrument includes both a loan and undrawn commitment component; (b) we have the contractual ability to demand repayment and cancel the undrawn commitment; and (c) our exposure to credit losses is not limited to the contractual notice period. For products in scope of this exemption, the expected life may exceed the remaining contractual life and is the period over which our exposure to credit losses is not mitigated by our normal credit risk management actions. This period varies by product and risk category and is estimated based on our historical experience with similar exposures and consideration of credit risk management actions taken as part of our regular credit review cycle. Products in scope of this exemption include credit cards, overdraft balances and certain revolving lines of credit. Determining the instruments in scope for this exemption and estimating the appropriate remaining life based on our historical experience and credit risk mitigation practices requires significant judgment.

Assessment of significant increase in credit risk

The assessment of significant increase in credit risk requires significant judgment. Movements between Stage 1 and Stage 2 are based on whether an instrument's credit risk as at the reporting date has increased significantly relative to the date it was initially recognized. For the purposes of this assessment, credit risk is based on an instrument's lifetime PD, not the losses we expect to incur. The assessment is generally performed at the instrument level.

Our assessment of significant increases in credit risk is performed at least quarterly based on three factors. If any of the following factors indicates that a significant increase in credit risk has occurred, the instrument is moved from Stage 1 to Stage 2:

(1) We have established thresholds for significant increases in credit risk based on both a percentage and absolute change in lifetime PD relative to initial recognition.
(2) Additional qualitative reviews are performed to assess the staging results and make adjustments, as necessary, to better reflect the positions whose credit risk has increased significantly.
(3) Instruments which are 30 days past due are generally considered to have experienced a significant increase in credit risk, even if our other metrics do not indicate that a significant increase in credit risk has occurred.

The thresholds for movement between Stage 1 and Stage 2 are symmetrical. After a financial asset has migrated to Stage 2, if its credit risk is no longer considered to have significantly increased relative to its initial recognition, the financial asset will move back to Stage 1.

For certain instruments with low credit risk as at the reporting date, it is presumed that credit risk has not increased significantly relative to initial recognition. Credit risk is considered to be low if the instrument has a low risk of default, and the borrower has the ability to fulfill their contractual obligations both in the near term and in the longer term, including periods of adverse changes in the economic or business environment. Certain interest-bearing deposits with banks, assets purchased under reverse repurchase agreements, insurance policy loans, and liquidity facilities extended to our multi-seller conduits have been identified as having low credit risk.

Use of forward-looking information

The measurement of expected credit losses for each stage and the assessment of significant increase in credit risk considers information about past events and current conditions as well as reasonable and supportable projections of future events and economic conditions. The estimation and application of forward-looking information requires significant judgment.

The PD, LGD and EAD inputs used to estimate Stage 1 and Stage 2 credit loss allowances are modelled based on the macroeconomic variables (or changes in macroeconomic variables) that are most closely correlated with credit losses in the relevant portfolio. Each macroeconomic scenario used in our expected credit loss calculation includes a projection of all relevant macroeconomic variables used in our models for a five year period, subsequently reverting to long-run averages. Macroeconomic variables used in our expected credit loss models include, but are not limited to, gross domestic product, unemployment rates, bond yields, equity return indices, commercial real estate indices, and commodity prices. Depending on their usage in the models, macroeconomic variables may be projected at a country, province/state or more granular level.

Our estimation of expected credit losses in Stage 1 and Stage 2 is a discounted probability-weighted estimate that considers a minimum of three future macroeconomic scenarios. Our base case scenario is based on macroeconomic forecasts published by our

internal economics group. Upside and downside scenarios vary relative to our base case scenario based on reasonably possible alternative macroeconomic conditions. Additional and more severe downside scenarios are designed to capture material non-linearity of potential credit losses in portfolios. Scenario design, including the identification of additional downside scenarios, occurs at least on an annual basis and more frequently if conditions warrant.

Scenarios are designed to capture a wide range of possible outcomes and weighted according to our best estimate of the relative likelihood of the range of outcomes that each scenario represents. Scenario weights take into account historical frequency, current trends, and forward-looking conditions and are updated on a quarterly basis. All scenarios considered are applied to all portfolios subject to expected credit losses with the same probabilities.

Our assessment of significant increases in credit risk is based on changes in probability-weighted forward-looking lifetime PD as at the reporting date, using the same macroeconomic scenarios as the calculation of expected credit losses.

Definition of default

The definition of default used in the measurement of expected credit losses is consistent with the definition of default used for our internal credit risk management purposes. Our definition of default may differ across products and considers both quantitative and qualitative factors, such as the terms of financial covenants and days past due. For retail and wholesale borrowers, except as detailed below, default occurs when the borrower is more than 90 days past due on any material obligation to us, and/or we consider the borrower unlikely to make its payments in full without recourse action on our part, such as taking formal possession of any collateral held. For certain credit card balances, default occurs when payments are 180 days past due. For these balances, the use of a period in excess of 90 days past due is reasonable and supported by observable data on write-off and recovery rates experienced on historical credit card portfolios. The definition of default used is applied consistently from period to period and to all financial instruments unless it can be demonstrated that circumstances have changed such that another definition of default is more appropriate.

Credit-impaired financial assets (Stage 3)

Financial assets are assessed for credit-impairment at each balance sheet date and more frequently when circumstances warrant further assessment. Evidence of credit-impairment may include indications that the borrower is experiencing significant financial difficulty, probability of bankruptcy or other financial reorganization, as well as a measurable decrease in the estimated future cash flows evidenced by the adverse changes in the payment status of the borrower or economic conditions that correlate with defaults. An asset that is in Stage 3 will move back to Stage 2 when, as at the reporting date, it is no longer considered to be credit-impaired. The asset will migrate back to Stage 1 when its credit risk at the reporting date is no longer considered to have increased significantly from initial recognition, which could occur during the same reporting period as the migration from Stage 3 to Stage 2.

When a financial asset has been identified as credit-impaired, expected credit losses are measured as the difference between the asset's gross carrying amount and the present value of estimated future cash flows discounted at the instrument's original effective interest rate. For impaired financial assets with drawn and undrawn components, expected credit losses also reflect any credit losses related to the portion of the loan commitment that is expected to be drawn down over the remaining life of the instrument.

When a financial asset is credit-impaired, interest ceases to be recognized on the regular accrual basis, which accrues income based on the gross carrying amount of the asset. Rather, interest income is calculated by applying the original effective interest rate to the amortized cost of the asset, which is the gross carrying amount less the related ACL. Following impairment, interest income is recognized on the unwinding of the discount from the initial recognition of impairment.

ACL for credit-impaired loans in Stage 3 are established at the borrower level, where losses related to impaired loans are identified on individually significant loans, or collectively assessed and determined through the use of portfolio-based rates, without reference to particular loans.

Individually assessed loans (Stage 3)

When individually significant loans are identified as impaired, we reduce the carrying value of the loans to their estimated realizable value by recording an individually assessed ACL to cover identified credit losses. The individually assessed ACL reflects the expected amount of principal and interest calculated under the terms of the original loan agreement that will not be recovered, and the impact of time delays in collecting principal and/or interest (time value of money). The estimated realizable value for each individually significant loan is the present value of expected future cash flows discounted using the original effective interest rate for each loan. When the amounts and timing of future cash flows cannot be estimated with reasonable reliability, the estimated realizable amount may be determined using observable market prices for comparable loans, the fair value of collateral underlying the loans, and other reasonable and supported methods based on management judgment.

Individually-assessed allowances are established in consideration of a range of possible outcomes, which may include macroeconomic or non-macroeconomic scenarios, to the extent relevant to the circumstances of the specific borrower being assessed. Assumptions used in estimating expected future cash flows reflect current and expected future economic conditions and are generally consistent with those used in Stage 1 and Stage 2 measurement.

Significant judgment is required in assessing evidence of credit-impairment and estimation of the amount and timing of future cash flows when determining expected credit losses. Changes in the amount expected to be recovered would have a direct impact on the Provision for credit losses and may result in a change in the ACL.

Collectively assessed loans (Stage 3)

Loans that are collectively assessed are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collectively-assessed ACL reflects: (i) the expected amount of principal and interest calculated under the terms of the original loan agreement that will not be recovered, and (ii) the impact of time delays in collecting principal and/or interest (time value of money).

The expected principal and interest collection is estimated on a portfolio basis and references historical loss experience of comparable portfolios with similar credit risk characteristics, adjusted for the current environment and expected future conditions. A portfolio specific coverage ratio is applied against the impaired loan balance in determining the collectively-assessed ACL. The time

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

value of money component is calculated by using the discount factors applied to groups of loans sharing common characteristics. The discount factors represent the expected recovery pattern of the comparable group of loans, and reflect the historical experience of these groups adjusted for current and expected future economic conditions and/or industry factors. Significant judgment is required in assessing evidence of impairment and estimation of the amount and timing of future cash flows when determining expected credit losses. Changes in the amount expected to be recovered would have a direct impact on the Provision for credit losses and may result in a change in the ACL.

Write-off of loans

Loans and the related ACL are written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, they are generally written off after receipt of any proceeds from the realization of collateral. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write off may be earlier. For credit cards, the balances and related ACL are generally written off when payment is 180 days past due. Personal loans are generally written off at 150 days past due.

Modifications

The original terms of a financial asset may be renegotiated or otherwise modified, resulting in changes to the contractual terms of the financial asset that affect the contractual cash flows. The treatment of such modifications is primarily based on the process undertaken to execute the renegotiation and the nature and extent of changes expected to result. Modifications which are performed for credit reasons, primarily related to troubled debt restructurings, are generally treated as modifications of the original financial asset. Modifications which are performed for other than credit reasons are generally considered to be an expiry of the original cash flows; accordingly, such renegotiations are treated as a derecognition of the original financial asset and recognition of a new financial asset.

If a modification of terms does not result in derecognition of the financial asset, the carrying amount of the financial asset is recalculated as the present value of the renegotiated or modified contractual cash flows, discounted at the original effective interest rate and a gain or loss is recognized. The financial asset continues to be subject to the same assessments for significant increase in credit risk relative to initial recognition and credit-impairment, as described above. A modified financial asset will migrate out of Stage 3 if the conditions that led to it being identified as credit-impaired are no longer present and relate objectively to an event occurring after the original credit-impairment was recognized. A modified financial asset will migrate out of Stage 2 when it no longer satisfies the relative thresholds set to identify significant increases in credit risk, which are based on changes in its lifetime PD, days past due and other qualitative considerations. The financial asset will continue to be monitored for significant increases in credit risk and credit-impairment.

If a modification of terms results in derecognition of the original financial asset and recognition of a new financial asset, the new financial asset will generally be recorded in Stage 1, unless it is determined to be credit-impaired at the time of the renegotiation. For the purposes of assessing for significant increases in credit risk, the date of initial recognition for the new financial asset is the date of the modification.

Impact of adoption of IFRS 9

Mandatory reclassifications

The combined application of the business model and SPPI tests on adoption of IFRS 9 resulted in the reclassification of the following financial assets and liabilities.

	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
(Millions of Canadian dollars)	Measurement category	Carrying amount	Previous measurement category	Carrying amount
Financial assets:				
Trading securities (1)	FVTPL	$ 2,572	Available-for-sale	$ 2,572
Trading securities (2)	FVTPL	398	Loans and receivables	398
Investment securities (3)	Amortized cost	23,602	Available-for-sale	23,473
Assets purchased under reverse repurchase agreements and securities borrowed (4)	FVTPL	11,720	Loans and receivables	11,720
Loans (2)	FVTPL	380	Loans and receivables	405
Loans (5)	FVOCI	547	Loans and receivables	540
Financial liabilities:				
Other				
Obligations related to assets sold under repurchase agreements and securities loaned (4)	FVTPL (designated)	$ 2,534	Amortized cost	$ 2,534

(1) $833 million of equity securities previously classified as available-for-sale were reclassified to FVTPL by nature. $1,739 million of debt securities previously classified as available-for-sale whose cash flows are not solely payments of principal or interest were reclassified to FVTPL.

(2) Loans and securities whose cash flows are not solely payments of principal or interest were reclassified to FVTPL.

(3) Debt securities managed within a HTC business model were reclassified from available-for-sale to amortized cost. As at April 30, 2018, the fair value of these securities was $19,310 million. For the three months and six months ended April 30, 2018, $90 million and $240 million of losses would have been recognized in OCI if the securities had not been reclassified, respectively.

(4) Assets purchased under reverse repurchase agreements and securities borrowed previously classified as loans and receivables were reclassified to FVTPL as they are managed on a fair value basis. Obligations related to assets sold under repurchase agreements and securities loaned, previously measured at amortized cost, were designated as FVTPL as they are similarly managed on a fair value basis.

(5) Loans managed under a business model to HTC&S were reclassified to FVOCI.

Items previously designated as FVTPL

The following financial assets previously designated as FVTPL were classified as FVTPL by nature because the assets are managed on a fair value basis or FVOCI as they are managed under a business model to HTC&S.

	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
(Millions of Canadian dollars)	Measurement category	Carrying amount	Previous Measurement category	Carrying amount
Financial assets:				
Investment securities	**FVOCI**	**$ 18**	FVTPL (designated)	$ 18
Trading securities	**FVTPL**	**4,291**	FVTPL (designated)	4,291
Assets purchased under reverse repurchase agreements and securities borrowed	**FVTPL**	**138,979**	FVTPL (designated)	138,979
Loans	**FVTPL**	**2,296**	FVTPL (designated)	2,296
Other assets	**FVTPL**	**1,212**	FVTPL (designated)	1,212

Optional designations

In conjunction with the classification changes required by IFRS 9, the following optional designations have been made on transition to IFRS 9.

	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
(Millions of Canadian dollars)	Measurement category	Carrying amount	Previous measurement category	Carrying amount
Financial assets:				
Investment securities (1)	**FVOCI (designated)**	**$ 384**	Available for sale	$ 384
Loans (2)	**FVTPL (designated)**	**1,368**	Loans and receivables	1,263
Financial liabilities:				
Deposits (3)	**FVTPL (designated)**	**$ 295**	Amortized cost	$ 324

(1) Certain equity securities that are not held for trading purposes have been designated as FVOCI.
(2) Loans in our insurance business were designated as FVTPL to address an accounting mismatch with the related liabilities.
(3) Certain deposits were designated as FVTPL to address an accounting mismatch with the related loans, which were reclassified to FVTPL because their cash flows are not solely payments of principal or interest.

Other

The following table presents other changes resulting from the adoption of IFRS 9.

	IFRS 9		IAS 39	
	As at			
	November 1, 2017		October 31, 2017	
(Millions of Canadian dollars)	Measurement category	Carrying amount	Previous measurement category	Carrying amount
Financial assets:				
Investment securities (1)	**Amortized cost**	**$ 7,220**	Loans and receivables	$ 7,232
Investment securities (1)	**Amortized cost**	**14,665**	Held to maturity	14,845

(1) Prior to the adoption of IFRS 9, certain financial assets were reclassified from available-for-sale to held-to-maturity or loans and receivables. Upon adoption of IFRS 9, these financial assets were remeasured as if they had always been carried at amortized cost and reclassified to Investment Securities.

Balance sheet presentation

On November 1, 2017, the balance sheet line item under Securities previously titled Available for sale was re-named to ‘Investment’. Investment securities represent all securities other than those measured at FVTPL, which are presented as Trading. For comparative periods, Investment securities represent securities previously classified as available-for-sale and held-to-maturity under IAS 39. For the current period, Investment securities represent securities classified as FVOCI and amortized cost under IFRS 9.

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

Allowance for credit losses

The following table is a comparison of impairment allowances determined in accordance with IAS 39 and IAS 37 to the corresponding impairment allowance determined in accordance with IFRS 9 as at November 1, 2017.

	IAS 39 / IAS 37 as at October 31, 2017				IFRS 9 as at November 1, 2017			
(Millions of Canadian dollars)	Collectively assessed (1)	Individually assessed	Total	Transition Adjustments	Stage 1	Stage 2	Stage 3	Total
Debt securities at fair value through other comprehensive income (2) (3)	$ –	$ –	$ –	$ 25	$ 3	$ 22	$ –	$ 25
Debt securities at amortized cost (4)	–	–	–	54	9	45	–	54
Assets purchased under reverse repurchase agreements and securities borrowed at amortized cost	–	–	–	1	1	–	–	1
Loans at amortized cost	1,855	304	2,159	590	845	1,184	720	2,749
Customer liability under acceptances at amortized cost	–	–	–	20	15	5	–	20
Other assets at amortized cost	–	–	–	1	–	1	–	1
Off-balance sheet loan commitments and financial guarantees	91	–	91	143	104	130	–	234
Total allowance for credit losses	$ 1,946	$ 304	$2,250	$ 834	$977	$1,387	$720	$3,084

(1) Includes the allowance for loans not yet identified as impaired and collectively-assessed allowances for impaired loans.
(2) The allowance for credit losses on financial assets at FVOCI is presented in Other components of equity.
(3) Previously available-for-sale debt securities under IAS 39.
(4) Previously held-to-maturity securities under IAS 39.

The table below provides the reconciliations from IAS 39 to IFRS 9 for our Consolidated Balance Sheets, showing separately the impacts of adopting the IFRS 9 impairment, and classification and measurement, requirements. The related tax impacts are included in Other assets – Other.

Consolidated Balance Sheets

(Millions of Canadian Dollars)	As at October 31, 2017 IAS 39	Impact of classification and measurement	Impact of impairment	Total Impact	As at November 1, 2017 IFRS 9
Assets					
Cash and due from banks	$ 28,407	$ –	$ –	$ –	**$ 28,407**
Interest-bearing deposits with banks	32,662	–	–	–	**32,662**
Securities					
Trading	127,657	2,952	–	2,952	**130,609**
Investment, net of applicable allowance	90,722	4,615	(54)	4,561	**95,283**
	218,379	7,567	(54)	7,513	**225,892**
Assets purchased under reverse repurchase agreements and securities borrowed	220,977	–	(1)	(1)	**220,976**
Loans					
Retail	385,170	(8)	–	(8)	**385,162**
Wholesale	159,606	(7,535)	8	(7,527)	**152,079**
	544,776	(7,543)	8	(7,535)	**537,241**
Allowance for loan losses	(2,159)	–	(590)	(590)	**(2,749)**
Segregated fund net assets	1,216	–	–	–	**1,216**
Other					
Customers' liability under acceptances	16,459	–	(20)	(20)	**16,439**
Derivatives	95,023	–	–	–	**95,023**
Premises and equipment, net	2,670	–	–	–	**2,670**
Goodwill	10,977	–	–	–	**10,977**
Other intangibles	4,507	–	–	–	**4,507**
Other assets	38,959	(1)	217	216	**39,175**
	168,595	(1)	197	196	**168,791**
Total Assets	$ 1,212,853	$ 23	$ (440)	$ (417)	**$ 1,212,436**
Liabilities					
Deposits					
Personal	$ 260,213	$ –	$ –	$ –	**$ 260,213**
Business and government	505,665	(29)	–	(29)	**505,636**
Bank	23,757	–	–	–	**23,757**
	789,635	(29)	–	(29)	**789,606**
Segregated fund net liabilities	1,216	–	–	–	**1,216**
Other					
Acceptances	16,459	–	–	–	**16,459**
Obligations related to securities	30,008	–	–	–	**30,008**
Obligations related to assets sold under repurchase agreements and securities loaned	143,084	–	–	–	**143,084**
Derivatives	92,127	–	–	–	**92,127**
Insurance claims and policy benefit	9,676	106	–	106	**9,782**
Other liabilities	46,955	–	143	143	**47,098**
	338,309	106	143	249	**338,558**
Subordinated debentures	9,265	–	–	–	**9,265**
Total liabilities	1,138,425	77	143	220	**1,138,645**
Equity attributable to shareholders					
Preferred shares	6,413	–	–	–	**6,413**
Common shares	17,703	–	–	–	**17,703**
Retained earnings	45,359	44	(602)	(558)	**44,801**
Other components of equity	4,354	(98)	19	(79)	**4,275**
	73,829	(54)	(583)	(637)	**73,192**
Non-controlling interests	599	–	–	–	**599**
Total equity	74,428	(54)	(583)	(637)	**73,791**
Total liabilities and equity	$ 1,212,853	$ 23	$ (440)	$ (417)	**$ 1,212,436**

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 2017 Annual Consolidated Financial Statements for a description of the valuation techniques and inputs used in the fair value measurement of our financial instruments. There have been no significant changes to our determination of fair value during the quarter.

	As at April 30, 2018 (IFRS 9)							
	Carrying value and fair value				Carrying value	Fair value		
(Millions of Canadian dollars)	Financial instruments classified as at FVTPL	Financial instruments designated as at FVTPL	Financial instruments classified as at FVOCI	Financial instruments designated as at FVOCI	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost	Total carrying amount	Total fair value
Financial assets								
Interest-bearing deposits with banks	$ –	$ 18,584	$ –	$ –	$ 18,395	$ 18,396	$ 36,979	$ 36,980
Securities								
Trading	124,463	6,705	–	–	–	–	131,168	131,168
Investment, net of applicable allowance (1)	–	–	42,253	414	47,006	46,466	89,673	89,133
	124,463	6,705	42,253	414	47,006	46,466	220,841	220,301
Assets purchased under reverse repurchase agreements and securities borrowed	188,842	–	–	–	72,342	72,338	261,184	261,180
Loans, net of applicable allowance								
Retail	109	189	96	–	386,299	383,284	386,693	383,678
Wholesale	5,943	1,312	450	–	156,995	155,245	164,700	162,950
	6,052	1,501	546	–	543,294	538,529	551,393	546,628
Other								
Derivatives	94,175	–	–	–	–	–	94,175	94,175
Other assets (2)	1,300	–	–	–	44,880	44,879	46,180	46,179
Financial liabilities								
Deposits								
Personal	$ 167	$ 13,891			$ 249,332	$ 249,091	$ 263,390	$ 263,149
Business and government (3)	(4)	101,158			429,211	429,926	530,365	531,080
Bank (4)	–	2,253			26,040	26,057	28,293	28,310
	163	117,302			704,583	705,074	822,048	822,539
Other								
Obligations related to securities sold short	33,047	–			–	–	33,047	33,047
Obligations related to assets sold under repurchase agreements and securities loaned	–	164,152			6,766	6,767	170,918	170,919
Derivatives	90,890	–			–	–	90,890	90,890
Other liabilities (5)	(1,307)	8			49,832	49,799	48,533	48,500
Subordinated debentures	–	–			9,068	9,319	9,068	9,319

	As at October 31, 2017 (IAS 39)						
	Carrying value and fair value			Carrying value	Fair value		
(Millions of Canadian dollars)	Financial instruments classified as at FVTPL	Financial instruments designated as at FVTPL	Available-for-sale instruments measured at fair value	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost	Total carrying amount	Total fair value
Financial assets							
Interest-bearing deposits with banks	$ –	$ 20,752	$ –	$ 11,910	$ 11,910	$ 32,662	$ 32,662
Securities							
Trading	116,720	10,937	–	–	–	127,657	127,657
Investment, net of applicable allowance (1)	–	–	75,877	14,845	14,771	90,722	90,648
	116,720	10,937	75,877	14,845	14,771	218,379	218,305
Assets purchased under reverse repurchase agreements and securities borrowed	–	138,979	–	81,998	81,999	220,977	220,978
Loans, net of applicable allowance							
Retail	69	–	–	383,857	380,782	383,926	380,851
Wholesale	1,837	2,329	–	154,525	153,967	158,691	158,133
	1,906	2,329	–	538,382	534,749	542,617	538,984
Other							
Derivatives	95,023	–	–	–	–	95,023	95,023
Other assets (2)	–	1,213	–	44,598	44,598	45,811	45,811
Financial liabilities							
Deposits							
Personal	$ 184	$ 13,794		$ 246,235	$ 246,147	$ 260,213	$ 260,125
Business and government (3)	(9)	94,518		411,156	412,495	505,665	507,004
Bank (4)	–	2,072		21,685	21,708	23,757	23,780
	175	110,384		679,076	680,350	789,635	790,909
Other							
Obligations related to securities sold short	30,008	–		–	–	30,008	30,008
Obligations related to assets sold under repurchase agreements and securities loaned	–	133,947		9,137	9,138	143,084	143,085
Derivatives	92,127	–		–	–	92,127	92,127
Other liabilities (5)	(1,132)	–		49,440	49,426	48,308	48,294
Subordinated debentures	–	–		9,265	9,559	9,265	9,559

(1) Investment securities include securities measured at FVOCI and amortized cost under IFRS 9 and available-for-sale (AFS) and held-to-maturity securities under IAS 39.
(2) Includes Customers' liability under acceptances and financial instruments recognized in Other assets.
(3) Business and government deposits include deposits from regulated deposit-taking institutions other than banks.
(4) Bank deposits refer to deposits from regulated deposit-taking institutions.
(5) 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

	IFRS 9						IAS 39					
	As at											
	April 30, 2018						October 31, 2017					
	Fair value measurements using			Total gross fair	Netting	Assets/ liabilities	Fair value measurements using			Total gross fair	Netting	Assets/ liabilities
(Millions of Canadian dollars)	Level 1	Level 2	Level 3	value	adjustments	at fair value	Level 1	Level 2	Level 3	value	adjustments	at fair value
Financial assets												
Interest-bearing deposits with banks	$ –	$ 18,584	$ –	$ 18,584	$	$ 18,584	$ –	$ 20,752	$ –	$ 20,752	$	$ 20,752
Securities												
Trading												
Canadian government debt (1)												
Federal	6,982	7,671	–	14,653		14,653	9,374	7,929	–	17,303		17,303
Provincial and municipal	–	11,205	–	11,205		11,205	–	11,422	–	11,422		11,422
U.S. state, municipal and agencies debt (1)	1,191	33,531	66	34,788		34,788	1,226	29,634	–	30,860		30,860
Other OECD government debt (2)	1,825	8,496	–	10,321		10,321	934	10,420	–	11,354		11,354
Mortgage-backed securities (1)	–	911	–	911		911	–	1,298	–	1,298		1,298
Asset-backed securities												
Non-CDO securities (3)	–	2,616	115	2,731		2,731	–	732	–	732		732
Corporate debt and other debt	13	21,298	23	21,334		21,334	52	21,655	29	21,736		21,736
Equities	31,353	2,872	1,000	35,225		35,225	29,674	2,853	425	32,952		32,952
	41,364	88,600	1,204	131,168		131,168	41,260	85,943	454	127,657		127,657
Investment (4)												
Canadian government debt (1)												
Federal	–	387	–	387		387	477	1,124	–	1,601		1,601
Provincial and municipal	–	610	–	610		610	–	2,503	–	2,503		2,503
U.S. state, municipal and agencies debt (1)	–	19,664	–	19,664		19,664	8	28,999	508	29,515		29,515
Other OECD government debt	–	1,117	–	1,117		1,117	479	8,673	–	9,152		9,152
Mortgage-backed securities (1)	–	1,186	–	1,186		1,186	–	934	–	934		934
Asset-backed securities												
CDO	–	4,873	–	4,873		4,873	–	3,623	–	3,623		3,623
Non-CDO securities	–	825	–	825		825	–	2,671	203	2,874		2,874
Corporate debt and other debt	–	13,558	33	13,591		13,591	–	23,662	797	24,459		24,459
Equities	39	101	246	386		386	339	38	711	1,088		1,088
Loan substitute securities	–	24	4	28		28	–	24	4	28		28
	39	42,345	283	42,667		42,667	1,303	72,251	2,223	75,777		75,777
Assets purchased under reverse repurchase agreements and securities borrowed	–	188,842	–	188,842		188,842	–	138,979	–	138,979		138,979
Loans	–	7,412	687	8,099		8,099	–	4,056	179	4,235		4,235
Other												
Derivatives												
Interest rate contracts	1	36,507	291	36,799		36,799	–	106,145	380	106,525		106,525
Foreign exchange contracts	–	43,829	72	43,901		43,901	–	42,871	63	42,934		42,934
Credit derivatives	–	77	–	77		77	–	157	–	157		157
Other contracts	4,024	10,753	320	15,097		15,097	3,510	10,141	307	13,958		13,958
Valuation adjustments	–	(669)	(22)	(691)		(691)	–	(722)	(3)	(725)		(725)
Total gross derivatives	4,025	90,497	661	95,183		95,183	3,510	158,592	747	162,849		162,849
Netting adjustments					(1,008)	(1,008)					(67,826)	(67,826)
Total derivatives						94,175						95,023
Other assets	1,097	203	–	1,300		1,300	966	247	–	1,213		1,213
	$46,525	$436,483	$2,835	$485,843	$ (1,008)	$484,835	$47,039	$480,820	$3,603	$ 531,462	$(67,826)	$ 463,636
Financial Liabilities												
Deposits												
Personal	$ –	$ 13,804	$ 254	$ 14,058	$	$ 14,058	$ –	$ 13,513	$ 465	$ 13,978	$	$ 13,978
Business and government	–	101,154	–	101,154		101,154	–	94,509	–	94,509		94,509
Bank	–	2,253	–	2,253		2,253	–	2,072	–	2,072		2,072
Other												
Obligations related to securities sold short	16,672	16,375	–	33,047		33,047	12,407	17,601	–	30,008		30,008
Obligations related to assets sold under repurchase agreements and securities loaned	–	164,152	–	164,152		164,152	–	133,947	–	133,947		133,947
Derivatives												
Interest rate contracts	–	31,501	796	32,297		32,297	–	100,765	835	101,600		101,600
Foreign exchange contracts	–	42,134	38	42,172		42,172	–	40,497	42	40,539		40,539
Credit derivatives	–	169	–	169		169	–	258	–	258		258
Other contracts	3,296	13,702	432	17,430		17,430	3,417	13,461	488	17,366		17,366
Valuation adjustments	–	(170)	–	(170)		(170)	–	55	13	68		68
Total gross derivatives	3,296	87,336	1,266	91,898		91,898	3,417	155,036	1,378	159,831		159,831
Netting adjustments					(1,008)	(1,008)					(67,704)	(67,704)
Total derivatives						90,890						92,127
Other liabilities	208	(1,531)	24	(1,299)		(1,299)	130	(1,286)	24	(1,132)		(1,132)
Subordinated debentures	–	–	–	–		–	–	–	–	–		–
	$20,176	$383,543	$1,544	$405,263	$ (1,008)	$404,255	$15,954	$415,392	$1,867	$ 433,213	$(67,704)	$ 365,509

(1) As at April 30, 2018, residential and commercial mortgage-backed securities (MBS) included in all fair value levels of trading securities were $22,151 million and $nil (October 31, 2017 – $17,977 million and $nil), respectively, and in all fair value levels of Investment securities were $4,625 million and $952 million (October 31, 2017 – $13,352 million and $727 million), respectively.

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

(3) CDO stands for collateralized debt obligations.

(4) Amounts as of October 31, 2017 exclude $100 million of Investment securities that are carried at cost.

Quantitative information about fair value measurements using significant unobservable inputs (Level 3 Instruments)
During the three months ended April 30, 2018, there were no significant changes made to the valuation techniques, sensitivities to, and interrelationships between unobservable inputs used in the determination of fair value of Level 3 financial instruments. During the three months ended April 30, 2018, changes in the ranges and weighted averages of unobservable inputs did not have a significant impact on the unrealized gains (losses) included in earnings for Level 3 financial instruments. Refer to Note 3 of our audited 2017 Annual Consolidated Financial Statements for quantitative information about fair value measurements using significant unobservable inputs.

Changes in fair value measurement for instruments measured on a recurring basis and categorized in Level 3
The following tables present the changes in fair value measurements on a recurring basis for instruments included in Level 3 of the fair value hierarchy.

	IFRS 9								
	For the three months ended April 30, 2018								
(Millions of Canadian dollars)	Fair value at beginning of period	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in OCI (2)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (3)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Changes in unrealized gains (losses) included in earnings for assets and liabilities for positions still held
Assets									
Securities									
Trading									
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	–
Investment									
U.S. state, municipal and agencies debt	–	–	–	–	–	–	–	–	n.a.
Asset-backed securities									
Non-CDO 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	
	277	–	3	–	(1)	4	–	283	n.a.
Loans	521	3	–	164	(1)	–	–	687	3
Other									
Net derivative balances (4)									
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)	–
	$ 1,538	$ (22)	$ 49	$ 222	$ (299)	$ 29	$ 52	$ 1,569	$ (39)
Liabilities									
Deposits									
Personal	$ (554)	$ (14)	$ (6)	$ (18)	$ 4	$ (108)	$ 442	$ (254)	$ (5)
Business and government	–	–	–	–	–	–	–	–	–
Other									
Obligations related to securities sold short	–	–	–	–	–	–	–	–	–
Other liabilities	(28)	–	(1)	–	5	–	–	(24)	–
	$ (582)	$ (14)	$ (7)	$ (18)	$ 9	$ (108)	$ 442	$ (278)	$ (5)

Note 3 Fair value of financial instruments (continued)

	IAS 39								
	For the three months ended April 30, 2017								
(Millions of Canadian dollars)	Fair value at beginning of period	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in OCI (2)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (3)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Changes in unrealized gains (losses) included in earnings for assets and liabilities for positions still held
Assets									
Securities									
Trading									
U.S. state, municipal and agencies debt	$ 1	$ –	$ –	$ –	$ –	$ –	$ –	$ 1	$ –
Asset-backed securities									
Non-CDO securities	4	–	–	6	(4)	–	–	6	–
Corporate debt and other debt	71	(1)	1	1	(11)	–	(2)	59	–
Equities	361	(24)	17	100	(17)	3	–	440	(19)
	437	(25)	18	107	(32)	3	(2)	506	(19)
Investment									
U.S. state, municipal and agencies debt	719	(2)	26	–	(44)	–	–	699	n.a.
Asset-backed securities									
Non-CDO securities	202	–	9	–	6	–	–	217	n.a.
Corporate debt and other debt	894	(1)	38	13	(3)	–	(14)	927	n.a.
Equities	716	10	25	14	(44)	–	–	721	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	n.a.
	2,531	7	98	27	(85)	–	(14)	2,564	n.a.
Loans	442	8	7	50	(3)	–	–	504	8
Other									
Net derivative balances (4)									
Interest rate contracts	(407)	(18)	–	–	–	–	–	(425)	(18)
Foreign exchange contracts	16	39	3	–	1	(4)	(1)	54	35
Other contracts	(240)	16	(11)	(15)	(12)	(26)	24	(264)	22
Valuation adjustments	(11)	–	–	–	(3)	–	–	(14)	–
	$2,768	$ 27	$115	$169	$(134)	$(27)	$ 7	$2,925	$28
Liabilities									
Deposits									
Personal	$ (364)	$ (9)	$ (7)	$ (64)	$ 20	$(54)	$135	$ (343)	$ (4)
Business and government	(2)	–	–	–	–	–	–	(2)	–
Other									
Obligations related to securities sold short	–	–	–	–	–	–	–	–	–
Other liabilities	(86)	(1)	(2)	–	63	–	–	(26)	–
	$ (452)	$(10)	$ (9)	$ (64)	$ 83	$(54)	$135	$ (371)	$ (4)

	IFRS 9								
	For the six months ended April 30, 2018								
(Millions of Canadian dollars)	Fair value at beginning of period (1)	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in OCI (2)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (3)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Changes in unrealized gains (losses) included in earnings for assets and liabilities for positions still held
Assets									
Securities									
Trading									
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)
Investment									
U.S. state, municipal and agencies debt	–	–	–	–	–	–	–	–	n.a.
Asset-backed securities									
Non-CDO 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.
Loans	477	2	(1)	214	(5)	–	–	687	2
Other									
Net derivative balances (4)									
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)	–
	$1,752	$ 23	$45	$ 480	$(682)	$ –	$ (49)	$1,569	$ 79
Liabilities									
Deposits									
Personal	$ (465)	$(45)	$ (2)	$(167)	$ 26	$(160)	$559	$ (254)	$(14)
Business and government	–	–	–	–	–	–	–	–	–
Other									
Obligations related to securities sold short	–	–	–	–	–	–	–	–	–
Other liabilities	(24)	(1)	–	(5)	6	–	–	(24)	–
	$ (489)	$(46)	$ (2)	$(172)	$ 32	$(160)	$559	$ (278)	$(14)

Note 3 Fair value of financial instruments (continued)

	IAS 39								
	For the six months ended April 30, 2017								
(Millions of Canadian dollars)	Fair value at beginning of period	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in OCI (2)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (3)	Transfers into Level 3	Transfers out of Level 3	Fair value at end of period	Changes in unrealized gains (losses) included in earnings for assets and liabilities for positions still held
Assets									
Securities									
Trading									
U.S. state, municipal and agencies debt	$ 1	$ –	$ –	$ –	$ –	$ –	$ –	$ 1	$ –
Asset-backed securities									
Non-CDO securities	4	–	–	6	(4)	–	–	6	–
Corporate debt and other debt	62	(2)	1	20	(30)	20	(12)	59	(1)
Equities	376	(42)	6	138	(52)	15	(1)	440	(37)
	443	(44)	7	164	(86)	35	(13)	506	(38)
Investment									
U.S. state, municipal and agencies debt	747	(5)	16	–	(59)	–	–	699	n.a.
Asset-backed securities									
Non-CDO securities	217	–	15	–	(15)	–	–	217	n.a.
Corporate debt and other debt	956	(1)	9	16	(33)	–	(20)	927	n.a.
Equities	756	22	13	23	(93)	–	–	721	n.a.
Loan substitute securities	–	–	–	–	–	–	–	–	n.a.
	2,676	16	53	39	(200)	–	(20)	2,564	n.a.
Loans	329	7	3	169	(4)	–	–	504	8
Other									
Net derivative balances (4)									
Interest rate contracts	(448)	(9)	–	26	–	3	3	(425)	(5)
Foreign exchange contracts	(15)	70	3	–	–	(2)	(2)	54	47
Other contracts	(122)	12	(7)	(33)	(4)	(48)	(62)	(264)	2
Valuation adjustments	(10)	–	–	–	(4)	–	–	(14)	–
	$ 2,853	$ 52	$ 59	$ 365	$ (298)	$ (12)	$ (94)	$ 2,925	$ 14
Liabilities									
Deposits									
Personal	$ (425)	$ (22)	$ –	$ (125)	$ 49	$ (122)	$ 302	$ (343)	$ (6)
Business and government	(2)	–	–	–	–	–	–	(2)	–
Other									
Obligations related to securities sold short	(1)	–	–	–	1	–	–	–	–
Other liabilities	(88)	(2)	1	–	63	–	–	(26)	–
	$ (516)	$ (24)	$ 1	$ (125)	$ 113	$ (122)	$ 302	$ (371)	$ (6)

(1) These amounts reflect certain reclassifications made upon adoption of IFRS 9. Refer to Note 2 for further details.
(2) 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 losses on Investment securities recognized in OCI were $2 million for the three months ended April 30, 2018 (April 30, 2017 – losses of $1 million) and gains of $30 million for the six months ended April 30, 2018 (April 30, 2017 – gains of $20 million), excluding the translation gains or losses arising on consolidation.
(3) Other includes amortization of premiums or discounts recognized in net income.
(4) Net derivatives as at April 30, 2018 included derivative assets of $661 million (April 30, 2017 – $680 million) and derivative liabilities of $1,266 million (April 30, 2017 – $1,329 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, 2018, transfers out of Level 1 to Level 2 included $143 million of Trading U.S. state, municipal and agencies debt and $363 million of Obligations related to securities sold short.

During the three months ended April 30, 2018, transfers out of Level 2 to Level 1 included $65 million of Trading U.S. state, municipal and agencies debt and $5 million of Obligations related to securities sold short.

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, 2018, significant transfers out of Level 2 to Level 3 included $21 million (net assets) of OTC equity options in Other contracts comprised of $220 million of derivative related assets and $199 million of derivative related liabilities. During the three months ended April 30, 2018, significant transfers out of Level 2 to Level 3 also included $108 of Personal deposits.

During the three months ended April 30, 2018, significant transfers out of Level 3 to Level 2 included $442 million of Personal deposits.

Transfers of over-the-counter (OTC) equity options in Other contracts were due to changes in the market observability of inputs, and transfers relating Personal deposits were due to changes in the market observability of inputs and in the significance of unobservable inputs to their fair values.

Positive and negative fair value movements of Level 3 financial instruments from using reasonably possible alternative assumptions

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.

The following table summarizes the impacts to fair values of Level 3 financial instruments using reasonably possible alternative assumptions. This sensitivity disclosure is intended to illustrate the potential impact of the relative uncertainty in the fair value of Level 3 financial instruments. In reporting the sensitivities below, we offset balances in instances where: (i) the move in valuation factor caused an offsetting positive and negative fair value movement, (ii) both offsetting instruments are in Level 3, and (iii) exposures are managed and reported on a net basis. With respect to overall sensitivity, it is unlikely in practice that all reasonably possible alternative assumptions would simultaneously be realized.

	IFRS 9			IAS 39		
	As at					
	April 30, 2018			October 31, 2017		
(Millions of Canadian dollars)	Level 3 fair value	Positive fair value movement from using reasonably possible alternatives	Negative fair value movement from using reasonably possible alternatives	Level 3 fair value	Positive fair value movement from using reasonably possible alternatives	Negative fair value movement from using reasonably possible alternatives
Securities						
Trading						
U.S. state, municipal and agencies debt	$ 66	$ –	$ (1)	$ –	$ –	$ –
Asset-backed securities	115	7	(10)	–	–	–
Corporate debt and other debt	23	–	–	29	–	–
Equities	1,000	9	(9)	425	–	–
Investment						
U.S. state, municipal and agencies debt	–	–	–	508	8	(20)
Asset-backed securities	–	–	–	203	15	(21)
Corporate debt and other debt	33	1	(1)	797	6	(6)
Equities	246	24	(24)	711	40	(24)
Loan substitute securities	4	–	–	4	2	–
Loans	687	6	(7)	179	2	(3)
Derivatives	661	24	(19)	747	34	(30)
	$ 2,835	$ 71	$ (71)	$ 3,603	$ 107	$ (104)
Deposits	$ (254)	$ 6	$ (6)	$ (465)	$ 11	$ (11)
Derivatives	(1,266)	47	(55)	(1,378)	37	(48)
Other						
Securities sold short and other liabilities	(24)	–	–	(24)	–	–
	$ (1,544)	$ 53	$ (61)	$ (1,867)	$ 48	$ (59)

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.

	IFRS 9	IAS 39	IFRS 9	IAS 39
	For the three months ended		For the six months ended	
(Millions of Canadian dollars)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Interest income (1)				
Financial instruments measured at fair value through profit or loss	$ 1,857	$ 1,500	$ 3,501	$ 2,894
Financial instruments measured at fair value through other comprehensive income	172		324	
Financial instruments measured at amortized cost	5,836		11,580	
Other categories of financial instruments (2)		4,991		10,056
	7,865	6,491	15,405	12,950
Interest expense (1)				
Financial instruments measured at fair value through profit or loss	$ 1,622	$ 946	$ 3,032	$ 1,714
Financial instruments measured at amortized cost	1,822		3,507	
Other categories of financial instruments (2)		1,347		2,714
	3,444	2,293	6,539	4,428
Net interest income	$ 4,421	$ 4,198	$ 8,866	$ 8,522

(1) Excludes the following amounts related to our insurance operations and included in Insurance premiums, investment and fee income in the Consolidated Statements of Income: For the three months ended April 30, 2018, Interest income of $113 million (April 30, 2017 – $111 million), and Interest expense of $2 million (April 30, 2017 – $1 million). For the six months ended April 30, 2018, Interest Income of $238 million (April 30, 2017 – $231 million), and Interest expense of $3 million (April 30, 2017 – $2 million).

(2) Includes assets classified as available-for-sale, loans and receivables, and held-to-maturity, and liabilities classified as amortized cost.

Note 4 Securities

Unrealized gains and losses on securities at fair value through other comprehensive income (IFRS 9) (1) (2) (3)

	As at			
	April 30, 2018			
(Millions of Canadian dollars)	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian government debt				
Federal	$ 391	$ –	$ (4)	$ 387
Provincial and municipal	625	1	(16)	610
U.S. state, municipal and agencies debt (4)	19,518	254	(108)	19,664
Other OECD government debt	1,116	2	(1)	1,117
Mortgage-backed securities	1,186	1	(1)	1,186
Asset-backed securities				
CDO	4,872	5	(4)	4,873
Non-CDO securities	816	9	–	825
Corporate debt and other debt	13,576	46	(31)	13,591
Equities	198	189	(1)	386
Loan substitute securities	29	1	(2)	28
	$ 42,327	$ 508	$ (168)	$ 42,667

Unrealized gains and losses on available-for-sale securities (IAS 39) (1) (2)

	As at			
	October 31, 2017			
(Millions of Canadian dollars)	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian government debt				
Federal	$ 1,608	$ 2	$ (9)	$ 1,601
Provincial and municipal	2,514	7	(18)	2,503
U.S. state, municipal and agencies debt (4)	29,477	242	(204)	29,515
Other OECD government debt	9,145	18	(11)	9,152
Mortgage-backed securities	934	1	(1)	934
Asset-backed securities				
CDO	3,610	13	–	3,623
Non-CDO securities	2,909	10	(45)	2,874
Corporate debt and other debt	24,396	106	(43)	24,459
Equities	875	320	(7)	1,188
Loan substitute securities	29	–	(1)	28
	$ 75,497	$ 719	$ (339)	$ 75,877

(1) The majority of the MBS are residential. Cost/Amortized cost, gross unrealized gains, gross unrealized losses and fair value related to commercial MBS are $953 million, $nil, $1 million and $952 million, respectively as at April 30, 2018 (October 31, 2017 – $727 million, $1 million, $1 million and $727 million, respectively).
(2) Excludes $47,006 million of held-to-collect securities as at April 30, 2018 that are carried at amortized cost, net of allowance for credit losses (October 31, 2017 – $14,845 million of held-to-maturity securities that are carried at amortized cost).
(3) Includes $45 million of allowance for credit losses on debt securities at FVOCI as at April 30, 2018 recognized in income and retained earnings.
(4) Includes securities issued by U.S. non-agencies backed by government insured assets, MBS and asset-backed securities issued by U.S. government agencies.

Allowance for credit losses on investment securities

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

- Transfers between stages, which are presumed to occur before any corresponding remeasurement of the allowance.
- Purchases and originations, which reflect the allowance related to assets newly recognized during the period, including those assets that were derecognized following a modification of terms.
- Derecognitions 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.
- Remeasurements, 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.
- During the three and six months ended April 30, 2018, there were no significant changes to the models used to estimate expected credit losses.

Allowance for credit losses – securities at amortized cost

	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended April 30, 2018			
	Performing		Impaired		Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 4	$ 35	$ –	$ 39	$ 9	$ 45	$ –	$ 54
Provision for credit losses								
Transfers in (out) to Stage 1	–	–	–	–	3	(3)	–	–
Transfers in (out) to Stage 2	–	–	–	–	(7)	7	–	–
Transfers in (out) to Stage 3	–	–	–	–	–	–	–	–
Purchases and originations	2	–	–	2	3	–	–	3
Derecognitions and maturities	(1)	(1)	–	(2)	(2)	(10)	–	(12)
Remeasurements	(1)	(5)	–	(6)	(2)	(7)	–	(9)
Exchange rate and other	–	2	–	2	–	(1)	–	(1)
Balance at end of period	$ 4	$ 31	$ –	$ 35	$ 4	$ 31	$ –	$ 35

Allowance for credit losses – securities at FVOCI (1)

	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended April 30, 2018			
	Performing		Impaired		Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 37	$ 5	$ –	$ 42	$ 3	$ 22	$ –	$ 25
Provision for credit losses								
Transfers in (out) to Stage 1	–	–	–	–	–	–	–	–
Transfers in (out) to Stage 2	–	–	–	–	–	–	–	–
Transfers in (out) to Stage 3	–	–	–	–	–	–	–	–
Purchases and originations	48	–	–	48	82	–	–	82
Derecognitions and maturities	(46)	–	–	(46)	(46)	(17)	–	(63)
Remeasurements	(1)	(1)	–	(2)	(1)	1	–	–
Exchange rate and other	2	1	–	3	2	(1)	–	1
Balance at end of period	$ 40	$ 5	$ –	$ 45	$ 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 profit or loss is presented in Other components of equity.

Credit risk exposure by internal risk rating

The following table presents the gross carrying amount of securities at amortized cost and the fair value of debt securities at FVOCI. Risk ratings are based on internal ratings as at the reporting date as outlined in the internal ratings maps for Wholesale and Retail facilities provided on pages 59-60 of our 2017 Annual Report.

	IFRS 9			
	As at April 30, 2018			
	Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total
Investment securities				
Securities at amortized cost				
Investment grade	$ 46,075	$ 97	$ –	$ 46,172
Non-investment grade	135	734	–	869
	46,210	831	–	47,041
Allowance for credit losses	4	31	–	35
Amortized cost	46,206	800	–	47,006
Securities at FVOCI				
Investment grade	41,195	31	–	41,226
Non-investment grade	1,026	1	–	1,027
	42,221	32	–	42,253
Items not subject to impairment (1)				414
				$ 42,667

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

Impairment of available for sale securities (IAS 39)

AFS securities were assessed for objective evidence of impairment at each reporting date and more frequently when conditions warrant. Depending on the nature of the securities under review, we applied specific methodologies to assess whether the cost/amortized cost of the security would be recovered. As at October 31, 2017, our gross unrealized losses on AFS securities were $339 million. There was no objective evidence of impairment on our AFS securities that were in an unrealized loss position as at October 31, 2017.

Note 4 Securities (continued)

Net gains and losses on available-for-sale securities (IAS 39) (1)

(Millions of Canadian dollars)	For the three months ended April 30 2017	For the six months ended April 30 2017
Realized gains	$ 75	$ 123
Realized losses	(7)	(11)
Impairment losses	(14)	(31)
	$ 54	$ 81

(1) Realized gains of $9 million for the three months ended April 30, 2017 and $11 million for the six months ended April 30, 2017 related to our insurance operations are excluded from Net gains and losses on Investment securities and are included in Insurance premiums, investment and fee income in the Consolidated Statements of Income. There were no realized losses or impairment losses related to our insurance operations for the three months and six months ended April 30, 2017.

During the three months ended April 30, 2017, $54 million of net gains were recognized in Non-interest income. The period reflects net realized gains of $68 million mainly comprised of distributions from, and gains on sales of, certain Equities and Other OECD government debt. Also included in the net gains were $14 million of impairment losses primarily on certain Equities.

During the six months ended April 30, 2017, $81 million of net gains were recognized in Non-interest income. The period reflects net realized gains of $112 million mainly comprised of distributions from, and gains on sales of, certain Equities and Other OECD government debt. Also included in the net gains were $31 million of impairment losses primarily on certain Equities and U.S. state, municipal and agencies debt.

Held-to-maturity securities (IAS 39)

Held-to-maturity securities measured at amortized cost were subject to periodic impairment review and were classified as impaired when, in management's opinion, there was no longer reasonable assurance of the timely collection of the full amount of principal and interest. The impairment review of held-to-maturity securities was primarily based on the impairment model for loans. As at October 31, 2017, there was no objective evidence of impairment on our held-to-maturity securities.

Note 5 Loans and Allowance for Credit Losses

Allowance for credit losses

	IFRS 9									
	For the three months ended April 30, 2018					For the six months ended April 30, 2018				
(Millions of Canadian dollars)	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
Retail										
Residential mortgages	$ 363	$ 19	$ (10)	$ 9	$ 381	$ 378	$ 32	$ (23)	$ (6)	$ 381
Personal	861	122	(107)	–	876	826	267	(209)	(8)	876
Credit Cards	680	136	(123)	1	694	693	234	(233)	–	694
Small business	50	8	(5)	(1)	52	49	17	(12)	(2)	52
Wholesale										
Business, sovereign and bank	1,025	(5)	(18)	10	1,012	1,010	67	(36)	(29)	1,012
Customers' liability under acceptances	16	(2)	–	1	15	20	(5)	–	–	15
	$ 2,995	$ 278	$ (263)	$ 20	$ 3,030	$ 2,976	$ 612	$ (513)	$ (45)	$ 3,030
Presented as:										
Allowance for loan losses	$ 2,776				$ 2,808	$ 2,749				$ 2,808
Other liabilities – Provisions	202				206	207				206
Customers' liability under acceptances	16				15	20				15
Other components of equity	1				1	–				1

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

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 remeasurement of the allowance.
- Purchases and originations, which reflect the allowance related to assets newly recognized during the period, including those assets that were derecognized following a modification of terms.
- Derecognitions 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.
- Remeasurements, 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.
- During the six months ended April 30, 2018, there were no significant changes to the models used to estimate expected credit losses.

Allowance for credit losses – Residential mortgages

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended 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	$ 130	$ 67	$ 166	$ 363	$ 140	$ 65	$ 173	$ 378
Provision for credit losses								
Transfers in (out) to Stage 1	17	(17)	–	–	39	(39)	–	–
Transfers in (out) to Stage 2	(6)	7	(1)	–	(11)	12	(1)	–
Transfers in (out) to Stage 3	(1)	(5)	6	–	(1)	(8)	9	–
Purchases and originations	17	–	–	17	33	–	–	33
Derecognitions and maturities	(3)	(2)	–	(5)	(6)	(5)	–	(11)
Remeasurements	(10)	9	8	7	(46)	36	20	10
Write-offs	–	–	(11)	(11)	–	–	(25)	(25)
Recoveries	–	–	1	1	–	–	2	2
Exchange rate and other	5	3	1	9	1	1	(8)	(6)
Balance at end of period	$ 149	$ 62	$ 170	$ 381	$ 149	$ 62	$ 170	$ 381

Allowance for credit losses – Personal

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended 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	$ 275	$ 459	$ 127	$ 861	$ 278	$ 427	$ 121	$ 826
Provision for credit losses								
Transfers in (out) to Stage 1	218	(218)	–	–	422	(422)	–	–
Transfers in (out) to Stage 2	(50)	50	–	–	(92)	92	–	–
Transfers in (out) to Stage 3	(1)	(35)	36	–	(1)	(78)	79	–
Purchases and originations	25	1	–	26	51	3	–	54
Derecognitions and maturities	(7)	(30)	–	(37)	(16)	(65)	–	(81)
Remeasurements	(207)	261	79	133	(387)	532	149	294
Write-offs	–	–	(137)	(137)	–	–	(266)	(266)
Recoveries	–	–	30	30	–	–	57	57
Exchange rate and other	–	–	–	–	(2)	(1)	(5)	(8)
Balance at end of period	$ 253	$ 488	$ 135	$ 876	$ 253	$ 488	$ 135	$ 876

Allowance for credit losses – Credit cards

(Millions of Canadian dollars)	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended 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	$ 212	$ 468	$ –	$ 680	$ 251	$ 442	$ –	$ 693
Provision for credit losses								
Transfers in (out) to Stage 1	216	(216)	–	–	444	(444)	–	–
Transfers in (out) to Stage 2	(41)	41	–	–	(81)	81	–	–
Transfers in (out) to Stage 3	(1)	(55)	56	–	(1)	(92)	93	–
Purchases and originations	3	–	–	3	6	1	–	7
Derecognitions and maturities	(3)	(13)	–	(16)	(7)	(43)	–	(50)
Remeasurements	(189)	271	67	149	(413)	550	140	277
Write-offs	–	–	(155)	(155)	–	–	(297)	(297)
Recoveries	–	–	32	32	–	–	64	64
Exchange rate and other	2	(1)	–	1	–	–	–	–
Balance at end of period	$ 199	$ 495	$ –	$ 694	$ 199	$ 495	$ –	$ 694

Note 5 Loans and Allowance for Credit Losses (continued)

Allowance for credit losses – Small business

	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended April 30, 2018			
	Performing		Impaired		Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 17	$ 15	$ 18	$ 50	$ 15	$ 15	$ 19	$ 49
Provision for credit losses								
Transfers in (out) to Stage 1	7	(7)	–	–	15	(15)	–	–
Transfers in (out) to Stage 2	(1)	1	–	–	(3)	3	–	–
Transfers in (out) to Stage 3	–	(3)	3	–	–	(6)	6	–
Purchases and originations	2	–	–	2	5	–	–	5
Derecognitions and maturities	(1)	(2)	–	(3)	(2)	(4)	–	(6)
Remeasurements	(8)	12	5	9	(15)	24	9	18
Write-offs	–	–	(7)	(7)	–	–	(16)	(16)
Recoveries	–	–	2	2	–	–	4	4
Exchange rate and other	(1)	1	(1)	(1)	–	–	(2)	(2)
Balance at end of period	$ 15	$ 17	$ 20	$ 52	$ 15	$ 17	$ 20	$ 52

Allowance for credit losses – Business, sovereign and bank

	IFRS 9							
	For the three months ended April 30, 2018				For the six months ended April 30, 2018			
	Performing		Impaired		Performing		Impaired	
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of period	$ 249	$ 334	$ 442	$ 1,025	$ 251	$ 352	$ 407	$ 1,010
Provision for credit losses								
Transfers in (out) to Stage 1	67	(67)	–	–	125	(125)	–	–
Transfers in (out) to Stage 2	(11)	14	(3)	–	(46)	49	(3)	–
Transfers in (out) to Stage 3	(1)	(13)	14	–	(1)	(19)	20	–
Purchases and originations	59	9	–	68	111	17	–	128
Derecognitions and maturities	(37)	(56)	–	(93)	(78)	(108)	–	(186)
Remeasurements	(76)	68	28	20	(108)	131	102	125
Write-offs	–	–	(36)	(36)	–	–	(63)	(63)
Recoveries	–	–	18	18	–	–	27	27
Exchange rate and other	4	6	–	10	–	(2)	(27)	(29)
Balance at end of period	$ 254	$ 295	$ 463	$ 1,012	$ 254	$ 295	$ 463	$ 1,012

Allowance for credit losses

	IAS 39						
	For the three months ended April 30, 2017						
(Millions of Canadian dollars)	Balance at beginning of period	Provision for credit losses	Write-offs	Recoveries	Unwind of the discount	Exchange rate and other	Balance at end of period
Retail							
Residential mortgages	$ 258	$ 20	$ (11)	$ 1	$ (6)	$ 11	$ 273
Personal	526	97	(136)	27	(2)	6	518
Credit cards	387	110	(141)	30	–	–	386
Small business	65	8	(11)	2	(1)	–	63
	1,236	235	(299)	60	(9)	17	1,240
Wholesale							
Business	1,001	66	(55)	7	(19)	15	1,015
Acquired credit-impaired loans	2	1	–	–	–	–	3
Total allowance for loan losses	2,239	302	(354)	67	(28)	32	2,258
Allowance for off-balance sheet and other items (1)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,330	$ 302	$ (354)	$ 67	$ (28)	$ 32	$ 2,349
Individually assessed	$ 377	$ 28	$ (33)	$ 2	$ (15)	$ 18	$ 377
Collectively assessed	1,953	274	(321)	65	(13)	14	1,972
Total allowance for credit losses	$ 2,330	$ 302	$ (354)	$ 67	$ (28)	$ 32	$ 2,349

	IAS 39						
	For the six months ended April 30, 2017						
(Millions of Canadian dollars)	Balance at beginning of period	Provision for credit losses	Write-offs	Recoveries	Unwind of the discount	Exchange rate and other	Balance at end of period
Retail							
Residential mortgages	$ 273	$ 26	$ (24)	$ 3	$ (11)	$ 6	$ 273
Personal	529	206	(274)	56	(5)	6	518
Credit cards	386	220	(282)	62	–	–	386
Small business	65	15	(20)	5	(2)	–	63
	1,253	467	(600)	126	(18)	12	1,240
Wholesale							
Business	979	128	(90)	39	(40)	(1)	1,015
Acquired credit-impaired loans	3	1	–	–	–	(1)	3
Total allowance for loan losses	2,235	596	(690)	165	(58)	10	2,258
Allowance for off-balance sheet and other items (1)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,326	$ 596	$ (690)	$ 165	$ (58)	$ 10	$ 2,349
Individually assessed	$ 365	$ 54	$ (43)	$ 28	$ (32)	$ 5	$ 377
Collectively assessed	1,961	542	(647)	137	(26)	5	1,972
Total allowance for credit losses	$ 2,326	$ 596	$ (690)	$ 165	$ (58)	$ 10	$ 2,349

(1) The allowance for off-balance sheet and other items is reported separately in Other liabilities – Provisions.

Key inputs and assumptions

The measurement of expected credit losses is a complex calculation that involves a large number of interrelated variables. The key drivers of changes in expected credit losses include the following:

- Changes in the credit quality of the borrower or instrument, reflected in changes in internal or external risk ratings;
- Changes in forward-looking macroeconomic conditions, specifically the variables to which our models are calibrated, which are those most closely correlated with credit losses in the relevant portfolio;
- Changes in scenario design and the weights assigned to each scenario; and
- Migration between stages, which can be trigged by changes to any of the above inputs.

Further details on the key inputs and assumptions used as at April 30, 2018 are provided below.

Internal risk ratings

Internal risk ratings are assigned according to the risk management framework outlined in the Credit Risk section of our 2017 Annual Report. Changes in internal risk ratings are reflected in the PD, LGD and EAD parameters, which are estimated based on our historical loss experience at the relevant risk segment or risk rating level, adjusted for forward-looking information.

Forward-looking macroeconomic variables

The PD, LGD and EAD inputs used to estimate Stage 1 and Stage 2 credit loss allowances are modelled based on the macroeconomic variables (or changes in macroeconomic variables) that are most closely correlated with credit losses in the relevant portfolio. Depending on their usage in the models, macroeconomic variables are projected at a country, province/state or more granular level. These include one or more of the real, financial and commodity variables, described below, which differ by portfolio and region.

Our Retail PD and LGD models primarily utilize housing price indices, unemployment rates, prime interest rates and 10-year government bond yields. Our Wholesale PD and LGD models utilize a broader range of variables, which vary by sector and/or product. These include, amongst other inputs: GDP, unemployment rates, 10-year government bond yields, 10-year corporate bond yields, equity return indices, commercial real estate indices, and commodity prices.

Each macroeconomic scenario used in our expected credit loss calculation includes a projection of all relevant macroeconomic variables used in our models for a five year period, subsequently reverting to long-run averages.

Scenario design

Our estimation of expected credit losses in Stage 1 and Stage 2 considers five distinct future macroeconomic scenarios. Scenarios are designed to capture a wide range of possible outcomes and are weighted according to our best estimate of the relative likelihood of the range of outcomes that each scenario represents. Scenario weights take into account historical frequency, current trends, and forward-looking conditions. The base case scenario is based on forecasts of the expected rate, value or yield for each of the macroeconomic variables identified above. The upside and downside scenarios are set by adjusting our base projections to construct reasonably possible scenarios that are more optimistic and pessimistic, respectively. Two additional downside scenarios were designed for the real estate and energy sectors to capture the non-linear nature of potential credit losses in these portfolios.

Migration between stages

Migration between Stage 1 and Stage 2 is based on the assessment of significant increases in credit risk relative to initial recognition. Refer to Note 2 for further details on our accounting policy for assessing significant increases in credit risk. The impact of moving from 12-months expected credit losses to lifetime expected credit losses, or vice versa, varies by product and is dependent on the expected remaining life at the date of the transfer. Stage migrations may result in significant fluctuations in expected credit losses.

Note 5 Loans and Allowance for Credit Losses (continued)

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 provided on page 59-60 of our 2017 Annual Report.

	IFRS 9			
	As at April 30, 2018			
(Millions of Canadian dollars)	Stage 1	Stage 2	Stage 3 (1)	Total
Retail				
Loans outstanding – Residential mortgages				
Low risk	$ 215,750	$ 619	$ –	$ 216,369
Medium risk	12,826	1,381	–	14,207
High risk	2,925	2,266	–	5,191
Not rated	35,906	645	–	36,551
Impaired	–	–	767	767
	267,407	4,911	767	273,085
Items not subject to impairment (2)				298
Total				273,383
Loans outstanding – Personal				
Low risk	$ 71,781	$ 1,497	$ –	$ 73,278
Medium risk	5,981	2,438	–	8,419
High risk	932	1,928	–	2,860
Not rated	6,903	242	–	7,145
Impaired	–	–	293	293
	85,597	6,105	293	91,995
Total				91,995
Loans outstanding – Credit cards				
Low risk	$ 12,397	$ 240	$ –	$ 12,637
Medium risk	2,866	869	–	3,735
High risk	474	947	–	1,421
Not rated	726	32	–	758
	16,463	2,088	–	18,551
Total				18,551
Loans outstanding – Small business				
Low risk	$ 1,857	$ 30	$ –	$ 1,887
Medium risk	2,174	112	–	2,286
High risk	82	194	–	276
Not rated	137	1	–	138
Impaired	–	–	42	42
	4,250	337	42	4,629
Total				4,629
Undrawn loan commitments – Retail				
Low risk	$ 178,092	$ 428	$ –	$ 178,520
Medium risk	10,171	386	–	10,557
High risk	3,458	187	–	3,645
Not rated	2,748	254	–	3,002
Total	194,469	1,255	–	195,724

(Millions of Canadian dollars)	IFRS 9 As at April 30, 2018 Stage 1	Stage 2	Stage 3 (1)	Total
Wholesale				
Loans outstanding – Business, Sovereign and Bank				
Investment grade	$ 38,827	$ 167	$ –	$ 38,994
Non-investment grade	102,141	8,598	–	110,739
Not rated	6,598	504	–	7,102
Impaired	–	–	1,553	1,553
	147,566	9,269	1,553	158,388
Items not subject to impairment (2)				7,255
Total	147,566	9,269	1,553	165,643
Undrawn loan commitments – Wholesale				
Investment grade	$ 200,509	$ 10	$ –	$ 200,519
Non-investment grade	96,651	8,668	–	105,319
Not rated	4,272	–	–	4,272
Total	301,432	8,678	–	310,110

(1) Stage 3 includes acquired credit-impaired (ACI) loans. As at April 30, 2018, acquired credit-impaired loans for Retail – Residential Mortgages was $1 million, Retail – Personal was $1 million and Wholesale – Business, Sovereign and Bank was $19 million.
(2) Retail Loans outstanding – Residential Mortgages and Wholesale Loans outstanding – Business, Sovereign and Bank items not subject to impairment are loans held at FVTPL.

Gross carrying value of loans individually determined to be impaired (1)

(Millions of Canadian dollars)	IAS 39 As at October 31 2017
Retail (2)	$ –
Wholesale (2)	
Business	1,126
Bank	–
Acquired credit-impaired loans	256
Total	$ 1,382

(1) Average balance of gross individually assessed impaired loans for the three months ended October 31, 2017 was $1,658 million.
(2) Excludes ACI loans.

Loans past due but not impaired (1)

	IFRS 9				IAS 39			
	As at							
	April 30, 2018				October 31, 2017			
(Millions of Canadian dollars)	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	$ 2,802	$ 1,297	$ 189	$ 4,288	$ 3,097	$ 1,337	$ 307	$ 4,741
Wholesale	1,308	432	–	1,740	1,251	424	–	1,675
	$ 4,110	$ 1,729	$ 189	$ 6,028	$ 4,348	$ 1,761	$ 307	$ 6,416

(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.

Acquired credit-impaired loans

ACI loans resulting from the acquisition of City National include Retail, Wholesale and Federal Deposit Insurance Corporation (FDIC) covered loans. The following table provides further details of our ACI loans.

	IFRS 9	IAS 39
	As at	
(Millions of Canadian dollars)	April 30 2018	October 31 2017
City National		
Unpaid principal balance (1)	$ 201	$ 245
Credit-related fair value adjustments	(5)	(5)
Interest rate and other related premium/(discount)	16	16
Carrying value	212	256
Individually assessed allowance	(3)	(3)
Carrying value net of related allowance	$ 209	$ 253

(1) Represents contractual amount owed net of write-offs since the acquisition of the loan.

Note 5 Loans and Allowance for Credit Losses (continued)

FDIC covered loans

FDIC covered loans are loans that, as at the reporting date, are subject to loss-share agreements with the FDIC under which the FDIC reimburses us for 80% of the net losses incurred on the underlying loan portfolio. As at April 30, 2018, the balance of FDIC covered loans recorded in Loans on the Consolidated Balance Sheet was $5 million (October 31, 2017 – $6 million). As at April 30, 2018, the balances for indemnification assets and clawback liabilities were $nil and $26 million (October 31, 2017 – $nil and $26 million), respectively.

Note 6 Deposits

The following table details our deposit liabilities.

	As at							
	April 30, 2018				October 31, 2017			
(Millions of Canadian dollars)	**Demand** (1)	**Notice** (2)	**Term** (3)	**Total**	Demand (1)	Notice (2)	Term (3)	Total
Personal	$ 133,780	$ 48,824	$ 80,786	$ 263,390	$ 134,184	$ 47,366	$ 78,663	$ 260,213
Business and government	236,048	8,161	286,156	530,365	229,337	9,520	266,808	505,665
Bank	8,019	176	20,098	28,293	8,587	158	15,012	23,757
	$ 377,847	$ 57,161	$ 387,040	$ 822,048	$ 372,108	$ 57,044	$ 360,483	$ 789,635
Non-interest-bearing (4)								
Canada	$ 87,793	$ 4,968	$ –	$ 92,761	$ 84,498	$ 4,871	$ –	$ 89,369
United States	32,792	109	–	32,901	34,441	90	–	34,531
Europe (5)	898	–	–	898	616	–	–	616
Other International	5,720	5	–	5,725	6,059	5	–	6,064
Interest-bearing (4)								
Canada	210,714	15,534	285,598	511,846	212,456	14,990	274,934	502,380
United States	1,616	32,033	63,635	97,284	847	32,263	55,840	88,950
Europe (5)	35,192	1,418	26,693	63,303	30,148	1,585	19,613	51,346
Other International	3,122	3,094	11,114	17,330	3,043	3,240	10,096	16,379
	$ 377,847	$ 57,161	$ 387,040	$ 822,048	$ 372,108	$ 57,044	$ 360,483	$ 789,635

(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, 2018, deposits denominated in U.S. dollars, British pounds, Euro and other foreign currencies were $307 billion, $19 billion, $39 billion and $29 billion, respectively (October 31, 2017 – $283 billion, $16 billion, $37 billion and $29 billion).
(5) Europe includes the United Kingdom, Luxembourg and the Channel Islands.

The following table presents the contractual maturities of our term deposit liabilities.

	As at	
(Millions of Canadian dollars)	**April 30 2018**	October 31 2017
Within 1 year:		
less than 3 months	$ 108,276	$ 71,841
3 to 6 months	52,284	41,221
6 to 12 months	70,871	82,588
1 to 2 years	48,913	52,033
2 to 3 years	47,651	40,400
3 to 4 years	22,996	30,062
4 to 5 years	14,412	18,745
Over 5 years	21,637	23,593
	$ 387,040	$ 360,483
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	$ 328,000	$ 328,000

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

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

Pension and other post-employment benefit expense

	For the three months ended			
	Pension plans		Other post-employment benefit plans	
(Millions of Canadian dollars)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Current service costs	$ 90	$ 95	$ 9	$ 10
Past service costs	–	–	–	–
Net interest expense (income)	2	10	18	17
Remeasurements of other long term benefits	–	–	(1)	2
Administrative expense	3	4	–	–
Defined benefit pension expense	$ 95	$ 109	$ 26	$ 29
Defined contribution pension expense	43	37	–	–
	$ 138	$ 146	$ 26	$ 29

	For the six months ended			
	Pension plans		Other post-employment benefit plans	
(Millions of Canadian dollars)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Current service costs	$ 179	$ 190	$ 19	$ 20
Past service costs	–	(2)	–	–
Net interest expense (income)	4	21	34	34
Remeasurements of other long term benefits	–	–	(1)	(2)
Administrative expense	7	7	–	–
Defined benefit pension expense	$ 190	$ 216	$ 52	$ 52
Defined contribution pension expense	95	84	–	–
	$ 285	$ 300	$ 52	$ 52

Pension and other post-employment benefit remeasurements (1)

	For the three months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
(Millions of Canadian dollars)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Actuarial (gains) losses:				
Changes in financial assumptions	$ (211)	$ 798	$ (22)	$ 115
Experience adjustments	–	–	(4)	(4)
Return on plan assets (excluding interest based on discount rate)	123	(534)	–	–
	$ (88)	$ 264	$ (26)	$ 111

	For the six months ended			
	Defined benefit pension plans		Other post-employment benefit plans	
(Millions of Canadian dollars)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Actuarial (gains) losses:				
Changes in financial assumptions	$ (193)	$ 33	$ (22)	$ 23
Experience adjustments	–	–	(6)	(6)
Return on plan assets (excluding interest based on discount rate)	38	(478)	–	–
	$ (155)	$ (445)	$ (28)	$ 17

(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

U.S. Tax Reform

In December 2017, the U.S. H.R. 1 was passed into law. The changes include a reduction in the corporate income tax rate from 35% to 21% which resulted in a write-down of $178 million (US$142 million) in the first quarter of 2018, primarily related to net deferred tax assets. As the reduced tax rates are effective on January 1, 2018, the lower average tax rate applicable to subsidiaries includes the fiscal 2018 blended rate for U.S. subsidiaries. Please refer to the Economic, market and regulatory review and outlook section of the Management's Discussion and Analysis for further details.

Note 9 Significant capital and funding transactions

Preferred shares

On November 13, 2017, we redeemed all 82,050 outstanding Non-Cumulative Perpetual First Preferred Shares Series C-1 for cash at a redemption price of US$1,000 per share (equivalent to US$25.00 per related depositary share).

Common shares issued (1)

	For the three months ended			
	April 30, 2018		April 30, 2017	
(Millions of Canadian dollars, except number of shares)	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans (2)	201	$ 15	739	$ 50
Purchased for cancellation (3)	(2,257)	(28)	(18,988)	(231)
	(2,056)	$ (13)	(18,249)	$ (181)

	For the six months ended			
	April 30, 2018		April 30, 2017	
(Millions of Canadian dollars, except number of shares)	Number of shares (thousands)	Amount	Number of shares (thousands)	Amount
Issued in connection with share-based compensation plans (2)	665	$ 45	2,218	$ 146
Purchased for cancellation (3)	(11,554)	(141)	(30,321)	(368)
	(10,889)	$ (96)	(28,103)	$ (222)

(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, 2018 and April 30, 2017, 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, 2018, we purchased for cancellation 2.3 million 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 11.6 million 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). For the three months ended April 30, 2017, we purchased for cancellation 19.0 million common shares at a total fair value of $1,637 million (average cost of $86.20 per share), with a book value of $231 million (book value of $12.14 per share). For the six months ended April 30, 2017, we purchased for cancellation 30.3 million common shares at a total fair value of $2,588 million (average cost of $85.34 per share), with a book value of $368 million (book value of $12.14 per share).

Note 10 Earnings per share

	For the three months ended		For the six months ended	
(Millions of Canadian dollars, except share and per share amounts)	April 30 2018	April 30 2017	April 30 2018	April 30 2017
Basic earnings per share				
Net Income	$ 3,060	$ 2,809	$ 6,072	$ 5,836
Preferred share dividends	(72)	(77)	(144)	(152)
Net income attributable to non-controlling interest	(9)	(8)	(20)	(20)
Net income available to common shareholders	2,979	2,724	5,908	5,664
Weighted average number of common shares (in thousands)	1,443,084	1,468,015	1,447,504	1,476,273
Basic earnings per share (in dollars)	$ 2.06	$ 1.86	$ 4.08	$ 3.84
Diluted earnings per share				
Net income available to common shareholders	$ 2,979	$ 2,724	$ 5,908	$ 5,664
Dilutive impact of exchangeable shares	3	3	7	7
Net income available to common shareholders including dilutive impact of exchangeable shares	2,982	2,727	5,915	5,671
Weighted average number of common shares (in thousands)	1,443,084	1,468,015	1,447,504	1,476,273
Stock options (1)	2,716	3,495	2,894	3,878
Issuable under other share-based compensation plans	754	743	753	740
Exchangeable shares (2)	3,183	3,309	3,148	3,441
Average number of diluted common shares (in thousands)	1,449,737	1,475,562	1,454,299	1,484,332
Diluted earnings per share (in dollars)	$ 2.06	$ 1.85	$ 4.07	$ 3.82

(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 price of $102.33 were excluded from the calculation of diluted earnings per share. For the three months ended April 30, 2017, no outstanding options were excluded from the calculation of diluted earnings per share. For the six months ended April 30, 2018, 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. For the six months ended April 30, 2017, no outstanding options 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 include the matters disclosed in our audited 2017 Annual Consolidated Financial Statements as updated below:

LIBOR regulatory investigations and litigation
The plaintiffs in the consolidated LIBOR class action moved for class certification. On February 28, 2018, the motion to have the class certified was denied in relation to Royal Bank of Canada. As such, unless that ruling is reversed on appeal, Royal Bank of Canada is no longer a defendant in any pending class action. Royal Bank of Canada is still a party to the various individual LIBOR actions.

Royal Bank of Canada Trust Company (Bahamas) Limited (RBC Bahamas) proceedings
The prosecutor's appeal in this matter was heard by the French appellate court in March 2018. A verdict is expected to be issued on June 29, 2018.

Interchange fees litigation
The Supreme Court of Canada declined the B.C. class action plaintiffs' request in *Watson* to appeal the decision striking the plaintiff class representative's cause of action under section 45 of the *Competition Act*. Additionally, at the plaintiffs' request, the trial in the *Watson* proceeding has been delayed to October 14, 2019.

In *9085-4886 Quebec Inc. v. Visa Canada Corporation, et al.,* the Quebec court dismissed the *Competition Act* claims by Quebec merchants for post-2010 damages and certified a class as to the remaining claims. The merchants have appealed the dismissal of their claims in the Quebec authorization decision. No date has yet been assigned for the appeal.

Note 12 Results by business segment

The following tables present operating results information for our business segments.

	For the three months ended April 30, 2018						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	$ 2,852	$ 632	$ –	$ 118	$ 841	$ (22)	$ 4,421
Non-interest income (2)	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 (4)	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
Net income	**$ 1,459**	**$ 537**	**$ 172**	**$ 212**	**$ 665**	**$ 15**	**$ 3,060**
Non-interest expense includes:							
Depreciation and amortization	$ 145	$ 133	$ 9	$ 30	$ 90	$ –	$ 407

	For the three months ended April 30, 2017						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
Net interest income (2) (3)	$ 2,597	$ 546	$ –	$ 173	$ 922	$ (40)	$ 4,198
Non-interest income (2) (5)	1,201	1,935	1,448	435	1,195	–	6,214
Total revenue (5)	3,798	2,481	1,448	608	2,117	(40)	10,412
Provision for credit losses (4)	262	15	–	–	24	1	302
Insurance policyholder benefits, claims and acquisition expense	–	–	1,090	–	–	–	1,090
Non-interest expense (5)	1,709	1,892	140	355	1,173	62	5,331
Net income (loss) before income taxes	1,827	574	218	253	920	(103)	3,689
Income taxes (recoveries)	467	143	52	60	252	(94)	880
Net income	$ 1,360	$ 431	$ 166	$ 193	$ 668	$ (9)	$ 2,809
Non-interest expense includes:							
Depreciation and amortization (6)	$ 144	$ 129	$ 9	$ 26	$ 89	$ –	$ 397

Note 12 Results by business segment (continued)

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
	For the six months ended April 30, 2018						
Net interest income (2) (3)	$ 5,708	$ 1,244	$ –	$ 246	$ 1,707	$ (39)	$ 8,866
Non-interest income (2)	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 (4)	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
Net income	$ 2,980	$ 1,134	$ 299	$ 431	$ 1,413	$ (185)	$ 6,072
Non-interest expense includes:							
Depreciation and amortization	$ 285	$ 263	$ 18	$ 60	$ 177	$ –	$ 803

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total
	For the six months ended April 30, 2017						
Net interest income (2) (3)	$ 5,246	$ 1,087	$ –	$ 410	$ 1,869	$ (90)	$ 8,522
Non-interest income (2) (5)	2,628	3,879	1,945	829	2,319	(64)	11,536
Total revenue (5)	7,874	4,966	1,945	1,239	4,188	(154)	20,058
Provision for credit losses (4)	511	28	–	–	56	1	596
Insurance policyholder benefits, claims and acquisition expense	–	–	1,273	–	–	–	1,273
Non-interest expense (5)	3,478	3,801	280	705	2,298	84	10,646
Net income (loss) before income taxes	3,885	1,137	392	534	1,834	(239)	7,543
Income taxes (recoveries)	933	276	92	127	504	(225)	1,707
Net income	$ 2,952	$ 861	$ 300	$ 407	$ 1,330	$ (14)	$ 5,836
Non-interest expense includes:							
Depreciation and amortization (6)	$ 301	$ 267	$ 17	$ 52	$ 174	$ –	$ 811

(1) Taxable equivalent basis.
(2) Inter-segment revenue and share of profits in joint ventures and associates are not material.
(3) Interest revenue is reported net of interest expense as we rely primarily on net interest income as a performance measure.
(4) Under IFRS 9, PCL on performing (Stages 1 and 2) financial assets are recorded within the respective business segment. Under IAS 39 and prior to November 1, 2017, PCL on loans not yet identified as impaired was included in Corporate Support. For further information, refer to the How we measure and report our business segments section of Management's Discussion and Analysis.
(5) Effective Q4 2017, service fees and other costs incurred in association with certain commissions and fees earned are presented on a gross basis in non-interest expense. Comparative amounts have been reclassified to conform with this presentation.
(6) Amounts have been revised from those previously presented.

The following tables present total assets and total liabilities for our business segments.

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
	As at April 30, 2018						
Total assets	$ 441,619	$ 89,659	$ 15,791	$ 133,629	$ 553,988	$ 40,092	$ 1,274,778
Total liabilities	$ 441,588	$ 89,805	$ 15,865	$ 133,550	$ 553,751	$ (35,806)	$ 1,198,753

(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
	As at October 31, 2017						
Total assets	$ 433,532	$ 89,493	$ 15,122	$ 133,126	$ 506,118	$ 35,462	$ 1,212,853
Total liabilities	$ 433,554	$ 89,571	$ 15,172	$ 132,987	$ 505,952	$ (38,811)	$ 1,138,425

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 2018, we complied with all capital and leverage requirements imposed by OSFI.

	As at	
(Millions of Canadian dollars, except Capital ratios and leverage ratios)	April 30 2018	October 31 2017
Capital (1)		
CET1 capital	$ 53,277	$ 51,572
Tier 1 capital	60,058	58,361
Total capital	69,214	67,556
Risk-weighted assets (RWA) used in calculation of capital ratios (1) (2)		
CET1 capital RWA	488,226	474,478
Tier 1 capital RWA	488,699	474,478
Total capital RWA	489,172	474,478
Total capital RWA consisting of: (1)		
Credit risk	396,996	376,519
Market risk	31,750	27,618
Operational risk	60,426	59,203
Regulatory floor adjustment (3)	–	11,138
Total Capital RWA	$489,172	$474,478
Capital ratios and Leverage ratios (1)		
CET1 ratio	10.9%	10.9%
Tier 1 capital ratio	12.3%	12.3%
Total capital ratio	14.1%	14.2%
Leverage ratio	4.3%	4.4%
Leverage ratio exposure (billions)	$ 1,381.0	$ 1,315.5

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

(2) In fiscal 2018, the CVA scalars were 80%, 83% and 86%, respectively. In 2017, the scalars were 72%, 77% and 81%, respectively.

(3) Before any capital floor requirement as applicable, there are three different levels of RWAs for the calculation of the CET1, Tier 1, and Total capital ratios arising from the option we have chosen for the phase-in of the CVA capital charge. Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the advanced internal ratings-based (AIRB) approach for credit risk. The capital floor was determined by comparing a capital requirement under Basel I and Basel III, as specified by OSFI. If the capital requirement under the Basel III standards was less than 90% of the capital requirements as calculated under the Basel I standards, the difference was added to the RWAs. Effective February 1, 2018, OSFI prescribed the transition from the current Basel I regulatory capital floor to a new regulatory capital floor of 75% of RWA based on the Basel II Standardized Approaches. This new regulatory floor will be transitioned over three quarters reflecting a regulatory capital floor requirement of 70%, 72.5%, and 75% in Q2 2018, Q3 2018, and Q4 2018, respectively.

Note 14 Subsequent events

On May 16, 2018, we announced that RBC Capital Trust will redeem all 500,000 units of its issued and outstanding Trust Capital Securities – Series 2008-1 on June 30, 2018 for cash, at a redemption price of $1,000 per unit, to be paid on July 3, 2018.

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
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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.

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
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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 30 million common shares during the period spanning from February 27, 2018 to February 26, 2019, 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.

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 (OSFI).

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.

2018 Quarterly earnings release dates

First quarter	February 23
Second quarter	May 24
Third quarter	August 22
Fourth quarter	November 28

Dividend dates for 2018
Subject to approval by the Board of Directors

	Record dates	Payment dates
Common and preferred shares series W, AA, AC, AD, AE, AF, AG, AJ, AK, AL, AZ, BB, BD, BF, BH, BI, BJ, BK and BM	January 25 April 25 July 26 October 25	February 23 May 24 August 24 November 23
Preferred shares series C-2 (US$)	January 26 April 27 July 27 October 26	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.

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